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BUSINESS WEEK

A MCGRAW-HILL PUBLICATION

FIFTY CENTS

MAY 16, 1959

The Aircraft Industry

Starts

a Hunt for its Future

(Industries)

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GENERAL BUSINESS

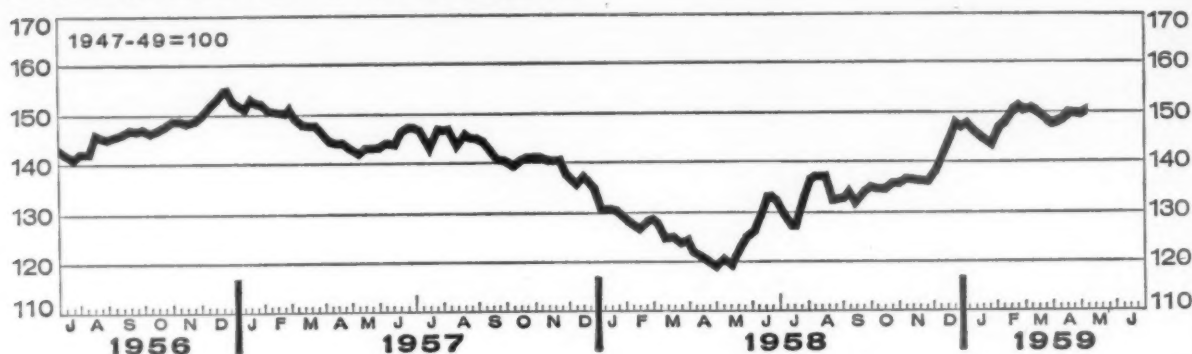
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FIGURES of the WEEK



	1946 Average	Year Ago	Month Ago	Week Ago	§ Latest Week
BUSINESS WEEK INDEX (chart)	91.6	120.4	149.4	†150.4	*151.1

PRODUCTION

Steel ingot (thous. of tons).....	1,281	1,412	2,657	†2,604	2,665
Automobiles and trucks.....	62,880	105,188	169,157	†154,719	172,089
Engineering const. awards (Eng. News-Rec. 4-wk. daily av. in thous.).....	\$17,083	\$67,805	\$63,952	\$62,490	\$64,337
Electric power (millions of kilowatt-hours).....	4,238	11,315	12,604	12,546	12,659
Crude oil and condensate (daily av., thous. of bbls.).....	4,751	6,220	7,127	7,113	7,200
Bituminous coal (daily av., thous. of tons).....	1,745	1,058	1,293	1,349	1,379
Paperboard (tons).....	167,269	264,699	312,695	320,662	313,894

TRADE

Carloadings: mfrs., miscellaneous and l.c.l. (daily av., thous. of cars).....	82	56	63	65	67
Carloadings: all others (daily av., thous. of cars).....	53	33	36	43	46
Department store sales index (1947-49 = 100, not seasonally adjusted).....	90	132	117	142	142
Business failures (Dun & Bradstreet, number).....	22	279	337	275	265

PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	398.6	390.5	390.1	388.1
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	††73.2	80.9	91.0	91.6	91.9
Foodstuffs, daily index (BLS, 1947-49 = 100).....	††75.4	91.2	81.3	81.8	82.2
Print cloth (spot and nearby, yd.).....	17.5¢	17.2¢	18.6¢	18.8¢	18.8¢
Finished steel, index (BLS, 1947-49 = 100).....	††76.4	181.6	186.7	186.7	186.7
Scrap steel composite (Iron Age, ton).....	\$20.27	\$32.00	\$35.17	\$33.83	\$33.83
Copper (electrolytic, delivered price, E & MJ, lb.).....	14.045¢	24.655¢	31.675¢	31.565¢	31.575¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.25	\$2.13	\$2.03	\$2.08
Cotton, daily price (middling, 1 in., 14 designated markets, lb.).....	**30.56¢	34.71¢	34.53¢	34.62¢	34.62¢
Wool tops (Boston, lb.).....	\$1.51	#	\$1.74	\$1.78	\$1.79

FINANCE

500 stocks composite, price index (S&P's, 1941-43 = 10).....	17.08	43.70	56.50	57.65	57.48
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	4.63%	4.83%	4.92%	4.93%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	¾-1%	1¾%	3%	3½%	3½%

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	54,915	56,717	57,804	56,231
Total loans and investments, reporting member banks.....	††71,916	91,973	95,168	94,666	94,283
Commercial and agricultural loans, reporting member banks.....	††9,299	30,129	31,009	31,330	31,369
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	30,496	30,380	29,276	28,892
Total federal reserve credit outstanding.....	23,888	24,763	27,357	27,212	27,424

MONTHLY FIGURES OF THE WEEK

	1946 Average	Year Ago	Month Ago	Latest Month
Housing starts (in thousands).....April.....	55.9	99.1	120.0	137.0
Employment (in millions).....April.....	55.2	62.9	63.8	65.0
Unemployment (in millions).....April.....	2.3	5.1	4.4	3.6
Average weekly earnings in manufacturing.....April.....	\$43.82	\$80.81	\$89.24	\$89.87
Retail sales (seasonally adjusted, in millions).....March.....	\$8,541	\$16,066	\$17,552	\$17,892

* Preliminary, week ended May 9, 1959.
† Revised.

†† Estimate.
** Ten designated markets, middling ½ in.

§ Date for 'Latest Week' on each series on request.
Insufficient trading to establish a price.

THE PICTURES—Cover—Joan Sydlow; 28—(lt.) W. W., (cen.) Noel Clark, (rt.) Joan Sydlow; 29—W. W.; 30, 31—Grant Compton; 38—Curtis-Wright Corp.; 60—Herb Kratovil; 68—Joan Sydlow; 78—Avco Corp.; 80—Harold A. Abramson; 84—(top) Lockheed Aircraft Corp., (top lt.) Bell Helicopter Corp., (bot. lt.) Chance Vought Aircraft, (bot. cen. & bot. rt.) Martin Co.; 85—(top lt. & cen.) Bell Aircraft Corp., (top rt.) Lockheed Aircraft Corp., (bot. lt.) Chance Vought, (bot. rt.) Martin Co.; 99—(top) Benjamin Katz Agency, (bot.) Trecker Aircraft Corp.; 102, 103—Stora Kopparberg; 107—Holland-America Line; 109—Tony Spina; 133—Tom O'Reilly; 162, 163—Herb Kratovil; 168—W. W.; 176, 177—Herb Kratovil.

WORLD'S MOST AMAZING "MEMORY" — NOW WORKING AT BANKERS TRUST!

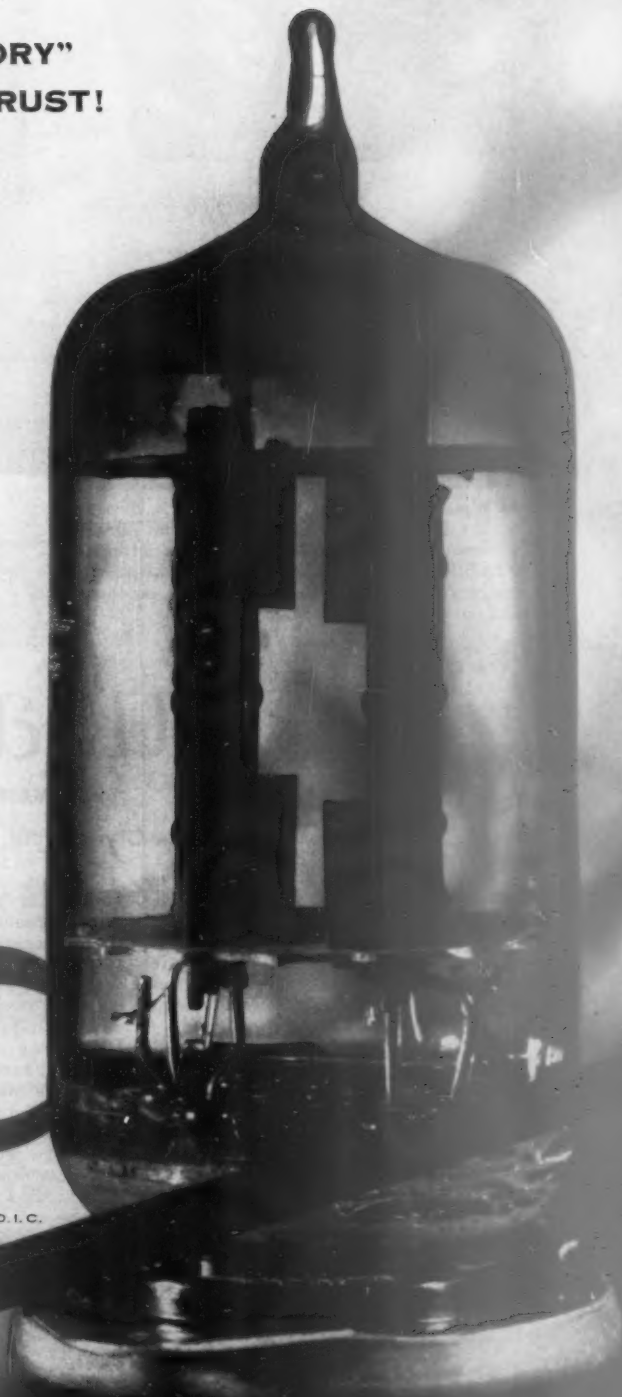
Magnetic tape memory units, each capable of recording 3,000,000 transactions per hour, are part of the electronic data processing machine recently installed at Bankers Trust. Since 1934, our Methods Research people have been devising unique systems to handle the constantly mounting volume of work with speed, accuracy, and economy. Aided by top consultants, we are evolving new banking systems using the most sophisticated equipment. Creative imagination and the newest techniques mean still faster, better service for our customer friends.



BANKERS TRUST COMPANY, NEW YORK

**FORWARD-LOOKING BUSINESS
NEEDS A FORWARD-LOOKING BANK**

MEMBER F.D.I.C.





In Wausau: Mr. Ash talks to Carroll E. Swenson (right), Director of the PTA Council Film Library, a project supported entirely by proceeds of the annual PTA Stunt Night—a 12-act variety show with parents, teachers and students doing all the writing, producing and directing.



In Clintonville, Mr. Ash looks over another Teracruz, the specially-built 8 wheel-drive vehicle the Air Force uses to transport missiles to previously inaccessible launching sites. FWD Corporation also builds a commercial version of the Teracruz that carries its cargo on 3½ foot long "rubber barrels" without jarring, even while traveling over snow, sand, swamp or boulder-strewn terrain.

Wausau Story

by MAURICE E. ASH, President,

FWD Corporation, Clintonville, Wisconsin • Heavy-duty vehicle specialists

"THIS year Wausau staged its 26th annual PTA Stunt Night. The show was a big success. The audiences that packed the auditorium for five nights had fun. So did the performers. And there are now more funds for the Wausau PTA Council Film Library.

"Back of the show is a story that will interest you. You know, in most cities, each PTA Group from each school has a fund-raising project of its own. But not in Wausau. There the groups get together for this one big annual production. A thousand people took part in this year's show. If they weren't in the cast, they were on a committee—sewing costumes, painting scenery, selling

tickets or baby-sitting while other parents practiced or performed.

"Cooperation like that is unusual. But this is an unusual community in many ways. Enthusiasm and cooperation have a part in everything Wausau people do. That includes the way they work. We've had plenty of opportunity to observe this right here in Clintonville. Our company has been a policyholder of Employers Mutuals of Wausau for 31 out of the 50 years we've been in business.

"We've worked together on many problems during this long association. We've called on Employers Mutuals to help us set up industrial nursing procedures, to help us prevent accidents,

to see that safety is a built-in part of our production. With typical Wausau enthusiasm and cooperation, Employers Mutuals people have helped us keep this a safe place to work . . . all at an impressive savings on our insurance costs."

Employers Mutuals has offices all across the country. We write all forms of fire, group and casualty insurance (including automobile). In the field of workmen's compensation we are one of the largest. We are proud of our reputation for fast claim service and our experience in preventing accidents. Consult your telephone directory for your nearest representative or write us in Wausau, Wisconsin.

Employers Mutuals of Wausau



"Good people to do business with"

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BUSINESS WEEK • May 16, 1959

READERS REPORT

Hawaiian Sugar

Dear Sir:

Your article No Sparkle in Commodity Prices [BW—Apr. 25 '59, p 145] contained on page 146 the following paragraph:

"The real problem, of course, is over-production. Latin American countries, Hawaii, and the Philippines are steadily boosting production. This steadily drives down world prices, with domestic prices carried along."

It goes without saying that . . . Hawaii's sugar production is "domestic production," and has been since Hawaii became an integral part of the United States as an incorporated Territory in 1898. However, the real point of this letter is to indicate that over-production does not obtain in Hawaii. The fact is Hawaii reached its quota in only two years, since 1952, as shown in the following table:

Year	Quota* (in tons)	Production
1952	1,092,000	1,020,450
1953	1,092,000	1,099,316
1954	1,092,000	1,077,347
1955	1,097,000	1,140,112
1956	1,135,496	1,099,543
1957	1,110,513	1,084,646
1958	1,110,513	764,953

* Final quota including local consumption.

Thus the reference to over-production in Hawaii is obviously contrary to facts.

SLATOR M. MILLER

VICE-PRESIDENT
 HAWAIIAN SUGAR PLANTERS' ASSN.
 WASHINGTON, D. C.

For Service Only

Dear Sir:

"TOOL MAKER DROPS ITS MASK" [BW—Apr. 25 '59, p 134] SOLIDLY COVERS OUR ENTRY INTO THE PORTABLE POWER TOOL BUSINESS. HOWEVER YOU STATE THAT WE WILL UTILIZE THE 43 SALES, . . . AND SERVICE OFFICES OF ANOTHER DIVISION, AMERICAN FLOOR MACHINE CO.

TO AVOID A MARKETING OR SALES POLICY MISUNDERSTANDING, WE WILL USE THOSE OFFICES FOR SERVICE ONLY—ALL SALES WILL BE THROUGH NORMAL JOBBERS AND WHOLESALE OUTLETS.

THOMAS J. DOLAN

CHAIRMAN
 AMERICAN-LINCOLN CORP.
 TOLEDO, OHIO

A black and white photograph of an industrial complex. On the left, a tall, multi-story structure with a complex steel framework, possibly a distillation column or a large storage tank, stands prominently. To its right is a large, rectangular building with a flat roof and a series of windows. In the foreground, there is a grassy field and a road. The overall scene is industrial and somewhat desolate.[illegible]

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water's not as wet, nor heat as hot, with...

G-E SILICONES

Chemical research at General Electric has created new silicone materials that are giving you better control over moisture and temperature . . . in "breathable" water repellents for clothing, leather and masonry . . . in lubricants and tough elastomers that work as well in space-cold missiles as they do in red-hot jets.

G.E. pioneered in silicone chemistry when silicones existed more in theory than in fact. Today, with the same creative imagination, G-E chemical research is finding new plastics . . . resins . . . laminates . . . electrical insulating materials . . . to help you improve your product or manufacture it more efficiently.

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CLARK EQUIPMENT



...of earth for new highways

Typical scene on a typical highway construction job—a huge MICHIGAN Dozer push-loading a MICHIGAN Scraper. Big advantage of these modern machines is their great earthmoving capacity—more in one minute and one load than 50 hand-laborers could move in one day. Photo was taken on new Interstate Highway construction in Arizona, but you can see the big yellow and blue MICHIGANS *wherever* contractors are interested in speed, economy, and size (note how tires alone dwarf men standing near Scraper).

...of dry freight: castings to candles

You're in Dallas looking at one of ICX Line's 110 BROWN Trailers. A typical load has just been delivered—castings, candles, dresses, 1,000 lb boxes of industrial cellophane. Quite a mixture, yet BROWN air ride kept trailer level, prevented cargo shifting even on curves and uneven ground.



T moves mountains...



...of pineapple, 8 tons at a time

One man on this towering CLARK-ROSS Straddle Carrier unloads an 8-ton bin of pineapple in one minute flat! He simply straddles truck bed, engages hooks, lifts, carries, and deposits load. Thus, Dole Hawaiian pineapple is delivered to cannery, processed and packed—all within 24 hours!



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Industry's Chemicals:

WHAT'S MAKING NEWS?

Grandmother used to throw a pinch of this and a pinch of that into her cooking to give it that certain zest. Modern industry uses the same technique in producing distinctive products of all types. Of course, industry has developed standards of measure more accurate than a "pinch" . . . and now has available a selection of chemical "seasonings" that would make any grandmother envious! Many Dow chemicals are used to give products that "extra something". News about a few is reported on briefly below.

You may wish to check certain items in this advertisement and forward to those concerned in your company.

ROUTE TO:

POLYOLS: Hard-working "go into's" improve products in 1,001 ways

Chances are you'll never go down to the corner drugstore with "Get Polyols!" on a shopping list. You won't have to! Industry remembers for us—and puts these chemicals to work in thousands of ways, as important ingredients in a final mix.

For the Polyols are *intermediates*—they "go into" other things as an intermediate step between initial material and final product. And, though you ordinarily don't see them, Polyols make a great ultimate difference to the products—and profits they enhance.

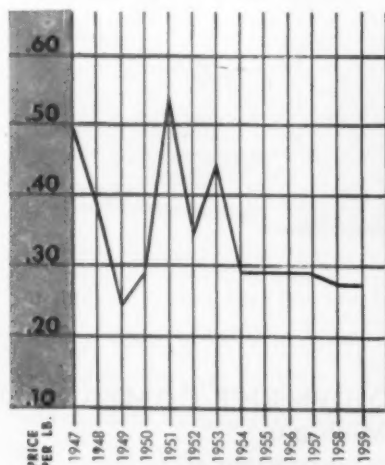
Chemically, of course, Polyols are alcohols (as a chemist would say, "They have two or more hydroxyl radicals"). They are chemical middlemen, intermediates, that go into thousands of product and process recipes—usually to make a powerful profit difference. For exhibit A, take glycerine . . .

Sweet supply problem. Probably the best-known member of the Polyol family is glycerine. Natural glycerine's history goes back many years. Even in ancient times the Greeks had a word for it—*glykeros*, meaning sweet. Its pleasant taste helps make many foods and pharmaceuticals palatable and salable.

But price and supply of this valu-

able chemical were notorious for their roller-coaster unreliability. The only thing they could be depended on for, was to throw any carefully calculated profit picture out of focus. For the last two centuries glycerine was available chiefly as a by-product of soap. And in time of war, when glycerine was commandeered to make nitroglycerine, dynamite and other explosives, supply was even more stringent.

As recently as the Korean War, glycerine prices and stocks fluctuated so violently that many discouraged users tried to reformulate in order to get along without this nearly indispensable ingredient. Then came a history-mak-



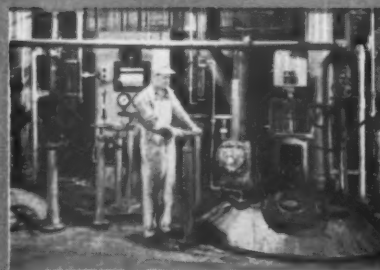
Synthetic glycerine from Dow helps stabilize prices, supply.
Price Statistics: Glycerine Statistics, L. Pasternak Company, 1947-1951; Journal of Commerce, 1952-1959

Highlights on the



PHARMACEUTICALS

Dow's pharmaceutical chemicals form the foundation for many medicines. These chemical intermediates have applications ranging from aspirin to many of today's better drugs.



DOWTHERM®

This highly efficient organic heat-transfer medium provides fraction-of-a-degree heat control (350°F.-750°F.). As a low-pressure vapor, it helps processors obtain more uniform products economically.

ing event in industrial chemistry—the advent of synthetic glycerine production.

Polyol flattens crazy price curve. Practical synthetic glycerine production was achieved in 1947. When Dow's first major synthetic plant went on stream a few years later, market price and supply stabilized. The by-product bottleneck was broken. Ever since, they have remained steady—and will continue to do so. For the Polyols: score a real assist in many industrial profit pictures!

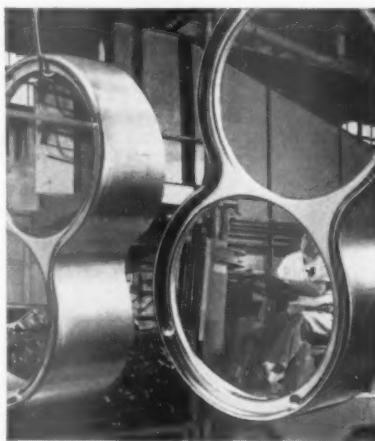
Other profitable Polyols: One everyone knows is the major ingredient of so-called "permanent" antifreeze—ethylene glycol. Dow's efficiency in production of this important Polyol has made it vastly more profitable for many of the major oil and automotive companies who use and/or sell this chemical to "let Dow do it" when it comes to manufacture. Result: an improved profit picture on this staple for many U.S. companies, with lower costs, better products.

The list of Polyols being profitably employed by industry is legion. The polypropylene glycols are a valuable workhorse in the production of urethane foams . . . the polyethylene glycols are invaluable as carriers in the cosmetics and pharmaceutical industry . . . the propylene glycols . . . diethylene and triethylene glycols . . . dipropylene and tripropylene glycols . . . the polypropylenes . . . all have indispensable special talents. You name it and it's sure to be one that Dow "makes the most of".

Put them to work! The valuable Polyol family is a problem-solver for industry. And the answers—specific Polyols—come in dozens of variations of physical form and molecular weight. Because Dow makes more kinds of Polyols than any other producer, they are most likely to have the one that

fits your needs. And Dow is constantly developing new ones. If existing Polyols do not precisely fit your needs, Dow chemists go whistling to their work of formulating one that will fit the product or process like a glove.

Because Dow is most *basic* in producing Polyols (controlling all the basic raw materials) the number and variety of new Polyols it can create are literally unlimited!



Dow offers industry's widest range of chlorinated solvents.

The case for BETTER SOLVENTS

Two firms, both about the same size, produce similar metal parts. One prospers, the other doesn't. Why? The answer may lie partially in their *solvent* position . . . not the financial kind, but the solvents they use in preparing parts for finishing. Putting the right solvent to work at a specific task can save thousands of dollars a year. These savings can be realized through more efficient solvent use and recovery, the elimination of parts re-runs, better finishing and improvement in other production factors.

Dow helps trim finishing costs in two important ways. First, by offering an exceptionally large selection of specialized metal cleaning solvents. For vapor degreasing, there are NEU-TRI® and ALK-TRI®, two of Dow's grades of trichloroethylene, as well as Dow perchloroethylene, and for stripping, Dow methylene chloride. For maintenance cleaning of all types, Chlorothene®, the efficient, safer, cold cleaner. Secondly, Dow and Dow solvent distributors offer technical service on metal cleaning problems to aid plants in the most efficient use of Dow solvents.

*TRADEMARK OF THE DOW CHEMICAL COMPANY

More citrus fruit SURVIVES THE RIDE

The time it takes for citrus fruit to get from growers' trees to consumers' tables has always been a problem. Perishables such as oranges, lemons and grapefruit undergo a certain amount of spoilage in their travels. Now spoilage can be controlled—and held to a bare minimum by treating fruit with formulations containing Dowicide® A. Dowicide A is one of fourteen specialized chemical preservatives produced by Dow. With this helpful new treatment, shipping losses have been considerably reduced . . . up to 85% in some cases.

Application is easy, inexpensive and formulations using Dowicide A won't harm machinery. Protection costs prove to be well worth the economic gain, especially for stored fruit where spoilage is cut as much as 40%.

★ ★ ★ ★

IS THE RECIPE for your products and processes as good as it can possibly be? If not, you may want to know more about the Dow chemicals discussed in this advertisement. For more information, write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Chemicals Merchandising Department 600AF5-16.

CHEMICAL HORIZON



PENTACHLOROPHENOL

Grigg Motor Sales, Charlotte, N.C. 40' x 135' building erected on Penta-treated poles for \$2.00 per square foot, excluding heating, electrical. Cost includes concrete floor, block wall, showroom windows.



CAUSTIC SODA

Dow's five producing plants and nine shipping terminals efficiently supply caustic in solid, ground, flake, 50% or 73% liquid form to Dow customers throughout the nation.

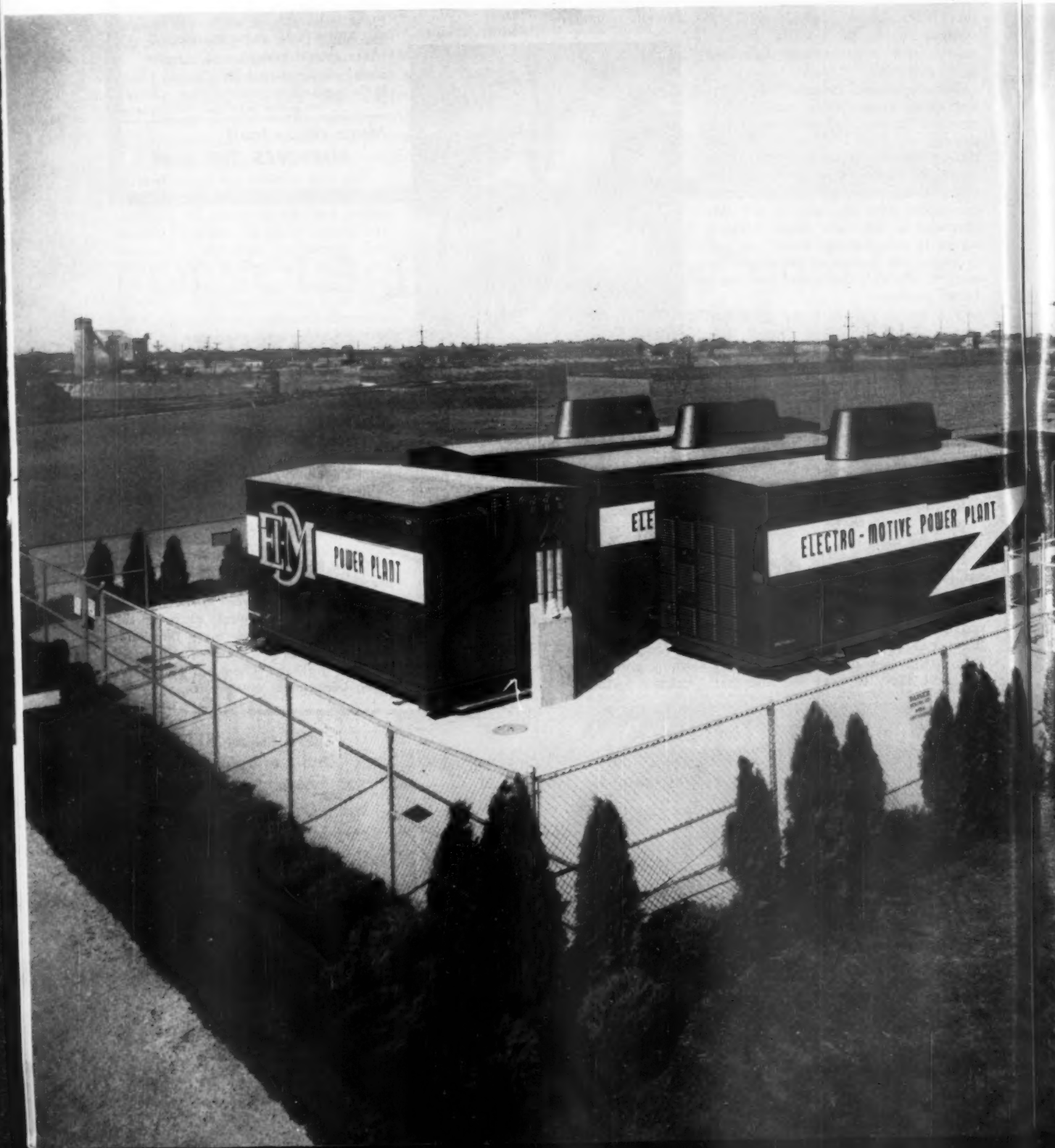
DOW CHEMICALS basic to industry

Glycols, Glycol Ethers
Amines and Alkylene Oxides
Benzene Derivatives
Inorganic Chlorides
Alkalies and Bromines
Solvents • Germicides • Fungicides
Herbicides • Fumigants
Hundreds of other Chemicals
Plastics • Magnesium

**THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN**



PUSH BUTTON PEAKING



- ANYWHERE, ANYTIME

Completely unattended, 6000 KW Electro-Motive Plant is on the line at full power in ninety seconds or less

A signal from a central dispatching point brings Electro-Motive Peaking Power on the line where it's needed—near the load. Within 90 seconds from the push of a button, you can satisfy peaking or spinning reserve requirements. It starts, synchronizes, goes on the line, and steps up to full power output *completely unattended*. No warm up period is needed, no prior preparation is required.

The Electro-Motive Peaking Plant is an *outdoor*, sound-deadened, weather-proofed plant ready for easy installation anywhere on the system—right at the step-down substation serving the load. No expensive building or foundation work is required.

Unitized, self-contained design allows:

- low investment cost . . \$85 per KW, f.o.b. factory
- low installation costs . . less than \$15 per KW
- flexibility in meeting site limitations
- adjustment in capacity at very low incremental cost

An Electro-Motive 6000 KW Peaking Plant can be operating on your system in less than 5 months time—4 months lead time plus 10 days for installation.

For complete details, see your Electro-Motive representative.



ELECTRO-MOTIVE DIVISION
GENERAL MOTORS • LA GRANGE, ILLINOIS

Sales-engineering offices: Chicago, New York, St. Louis, San Francisco

In Canada: General Motors Diesel Limited, London, Ontario

Crucible steel service

HOW MULTI-PLANT COMPANIES CAN NOW STANDARDIZE ON SPECIALTY STEELS

A multi-plant owner recently discovered that no two of his plants used the same specialty steels, for no particular reason. Then he found that *using so many steels caused unnecessary expense* — in complicated, costly purchasing and excessive inventories. Worse still, the experience gained with steels at one plant wasn't being put to use in any of the others.

By using Crucible specialty steel centers, this multi-plant owner slashed costs substantially. He was able to streamline purchasing and even accounting for both plant and home office departments. This arrangement also reduced inventories and made them easier to check. And an exchange of technical information began flowing between plants.

This is a job only Crucible can do — for three reasons:

First, Crucible produces the full range of specialty steels for all industry's needs.

Second, Crucible distributes this full range through the largest network of local warehouses.

Third, Crucible staffs these service centers with engineer specialists in tool steels, stainless, and alloys.

All 32 local Crucible warehouses are stocked, equipped and staffed to service any plant, large or small. For details on how they can help you economize, call the one nearest you. Or write: *Crucible Steel Company of America, Dept. ME-05, The Oliver Building, Mellon Square, Pittsburgh 22, Pa.*

Crucible products: 4 of thousands

VACUUM-MELTED METALS — An infinite variety of products, such as these aircraft compressor blades, are now made of vacuum-melted metals. Vacuum melting improves tensile and fatigue strength, corrosion resistance, ductility. Crucible technology and facilities embrace all the major melting processes.



TOOL STEEL — A toolmaker checks the finished dimensions of a large progressive die made of Crucible Full Finish die steel. High speed, air-, oil- and water-hardening tool steels, such as REX®, KETOS®, AIRDI®, AIRKOOL, LA BELLE® and SANDERSON, are familiar names in virtually all the nation's metalworking plants.



COLD ROLLED ALLOY STRIP STEELS — Crucible produces the broadest range of cold rolled alloy strip steels in the industry. These steels are used in small hand tools, hand and band saw blades, chain saws, and for the millions of stamped and formed parts used in every industry.



STAINLESS STEEL SHEET AND STRIP — Retractable dome of new Pittsburgh Civic Auditorium is being sheathed with stainless steel. A major supplier to the building industries, Crucible produces stainless of uniform quality in all types, finishes, sizes.

FROM CREATIVE

CRUCIBLE — the one full range of special steels: high speed; tool steel; plastic mold; stainless; free-machining, high-strength, wear-resistant and standard AISI alloys; hollow drill; agricultural discs and shapes; heavy-duty coil springs; specialty alloys; permanent magnets; cold rolled alloy and carbon spring steels; titanium and titanium alloys; stainless and high alloy welded tubing; vacuum melted metals.

CRUCIBLE STEEL COMPANY OF AMERICA

(Advertisement)

U. S. Government study finds

**AIR CONDITIONING
PAYS OFF WITH
9% INCREASE IN
PRODUCTIVITY**

The findings reported in this advertisement are of great significance not only to the air conditioning industry but to employers and employees everywhere. A copy of the study in its entirety will gladly be mailed upon request.

Carrier Corporation • Syracuse, New York

Do workers produce more in air conditioned space? If so, is the increase enough to make air conditioning pay off?

Today more than ever before commerce and industry are vitally interested in the answers to these questions—but no more so than the Public Buildings Service of the U. S. General Services Administration, responsible for maintaining and operating 74,000,000 sq. ft. of space.

In a just-published document of far-reaching significance entitled "Influence of Air Conditioning on Work Production" the government agency states: "We know, from our previous studies, that a seven-minute saving in time per employee per day will more than pay for the expense of an air conditioning system. In other words, if work production increases only 1.5 percent per year, the system will pay for itself through savings in salaries."

But how much of an increase in productivity does air conditioning actually deliver? Past studies left room for conjecture because of other environmental changes—lighting, acoustical treatment and the like—made at the time air conditioning was installed. So the Public Buildings Service decided to conduct a test of its own, under carefully controlled conditions. Here is how they went about it.

Air Conditioning Only Variable

Two large office spaces were selected, in each of which thousands of clerical "searches" are conducted year after year. One area was air conditioned; the second was not. But in all other respects the two were identical—including lighting, painting, the number of employees (70) who worked in each, average age and distribution between men and women.

For five months—May through September 1957—painstaking records were kept on work rates, number of errors and absenteeism in both groups. As for the results, the report states, "Does air conditioning increase work production? The answer to this important question definitely is 'yes'. The work output of employees in an air conditioned space is greater, on the average, by more than nine percent than that of employees in similar space which is not air conditioned."

Absenteeism Reduced

Air conditioning also has an important bearing on absenteeism. Says the report:

"Accurate records were kept of all sick leave taken and its causes. All absences positively not associated with air conditioning (fractured bones, operations . . . etc.) were disregarded. In the non-air conditioned space, the absenteeism was 2.5 percent higher than in the air conditioned space."

Other benefits of air conditioning on the basis of the evidence were:

"A slight decrease in errors (0.9 percent).

"A measurable decrease in employees' living expenses (savings on cleaning bills, hairdos, make-up, etc.).

"An important contribution to employee comfort and morale."

Over-all Conclusion

The concluding section of the report reads in part: "It is safe to assume that in any other type of office work, where the rate of production is not standardized, or where no minimum requirement must be met consistently, the increase in productivity will be more than enough to pay for air conditioning through savings in employee salaries."

HOW **HERCULES** HELPS...



"CLEAN UP, PAINT UP, FIX UP"...

Many of the nation's leading cities are currently observing "Clean-up, paint-up, fix-up" month. Hercules materials play an important role in the maintenance of homes and industrial buildings. Paints, thinners, disinfectants, cleaners, wallpaper are typical of finished products that depend on Hercules resins and other basic ingredients.

MAKE BETTER PRODUCTS...

A plastic reservoir and lid made from Pro-fax®, Hercules polypropylene, make the new Prak-T-Kal vaporizer-humidifier lightweight, virtually unbreakable, easy and safe to handle and store. The many superior qualities of Pro-fax are leading to the selection of this completely new plastic for many applications that previously could be met only by more costly materials.



HERCULES

HERCULES POWDER COMPANY

INCORPORATED

900 Market Street, Wilmington 99, Delaware

CHEMICAL MATERIALS FOR INDUSTRY



Q59-3

BUSINESS OUTLOOK

BUSINESS WEEK

MAY 16, 1959



Those employment figures for April (page 34) are all you need for a pretty clear reading of the business situation:

- More people working than ever before at this time of year.
- Nonfarm jobs above the previous record for the month by 650,000.
- Factory employment up slightly (but topping seasonal expectations even so) and the work-week lengthening again.

These employment data give you a key insight into the rate at which consumer income is gaining—and how retail sales will be doing.

Record employment with workers putting in longer hours fattened pay envelopes. The average factory hand earned \$89.87 a week in April, the Bureau of Labor Statistics estimates.

The month before, the average had been \$89.24 weekly (about 60¢ better, on a second check, than the original March estimate, so the figure on total income from wages last month goes higher on revision, too).

Factory employment has declined between March and April in six of the last seven years. So a rise of 30,000 last month, small as it may seem, constituted a real improvement.

Thus you take better-than-seasonal factory employment, couple it with more overtime, and you know production set a new high last month. More man-hours plus greater productivity per man-hour are pushing up the Federal Reserve Board's index of industrial production.

Of course, gains in employment and production must still be weighed in the light of inventory building as strike insurance (not just in steel, but in other metals as well). Yet the gains recorded, along with April's exceptional cut in unemployment, go a good way toward relieving the apprehensions that might be created by the 3.6-million still out of work.

—●—

Consumers are spending; of that there can be little doubt.

Figures on department store sales have shown post-Easter gains very nearly as robust as those before the holiday. And the dollar volume of all types of stores is setting one new high after another.

Each month, starting last December, retail sales have posted a new record after allowance for seasonal variations.

The April figure for all types of stores just barely missed \$18-billion, up about \$100-million from the March figure (and the March total, on revision, went nearly \$200-million above the preliminary estimate).

Retail sales, in fact, now are running at an annual rate of about \$215-billion, up from \$200-billion in both 1957 and 1958.

Volume of outlets selling autos and automotive products—parts as well as cars, both new and used—is setting the retail sales pace.

They rolled up almost \$13-billion of sales in the first four months this year, nearly \$2-billion, or 19%, better than a year earlier.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

MAY 16, 1959

Another impressive gain was the 13% for establishments selling **lumber, hardware, farm equipment, and related lines.**

Softgoods stores rang up \$47-billion for the four months, up from \$44.6-billion the year before. Though this increase of a little better than 5% looks puny alongside autos, few merchants would sneer at it.

Booming retail sales for establishments reliant on the construction of new homes are easy to understand.

A new estimate at midweek placed the number of starts for April at 137,000 dwelling units, **nearly 40,000 better than last year and a new record for the month** (topping April of 1950 by a narrow margin).

Privately financed starts in April were at a seasonally adjusted annual rate of 1,390,000, about the same as the month before. There has not, in fact, been any real deviation in this high level in six months.

There is every indication that new housing starts for the first half of this year will be only slightly below 700,000. That would make it the second highest on record, just short of 1950 (when an unbelievable second quarter sent the total skyrocketing).

Actual construction work done on new housing is, of course, **breaking all records in terms of dollar value.** This is due to better quality in a measure, but mainly to the steady rise in costs.

The value of work done last month on new dwelling units (quite apart from additions and alterations) is estimated at more than \$1.3-billion, fully \$400-million above the year-earlier figure.

Housing's huge gains are continuing to bolster the year-to-year increases scored by construction of all types.

Last month, for example, the value of all construction work put in place came to an estimated \$4.2-billion. That was \$560-million better than the year before with housing providing \$400-million of the rise.

The other major contributor was **highway work with a \$100-million gain.**

Wildcat strikes and slowdowns, though minor in character, are blamed by the **steel industry** for output a little short of production goals.

Partly as a result of this, it now looks as though **ingot output for the six months may not go above 62-million tons.** That, however, would be the highest for any six-month period on record and about 65% higher than actual production for the same period last year.

Auto dealers have their work cut out for them. **Their stock of new cars apparently is the highest ever** for this or any other time of year, if you include the imported models they have on hand.

An estimate by Ward's Automotive Reports puts the May 1 stock in dealers' hands or in transit at **almost exactly a million cars.** That includes an estimated 107,000 foreign autos (or a little more than two months' supply at the present rate of sales).



EUROPEAN AIRLIFT! Fly a headache remedy to Paris? Of course! Drug manufacturers have proved Pan Am Clipper® Cargo is the surest, easiest and — in terms of TOTAL cost — the *most economical* way to ship abroad!

What can Monsieur Lebroc's migraine teach the chairman of the board?

Overseas business headaches vanish via Pan Am Clipper Cargo! For air cargo makes sales *soar*, costs *drop*, problems *shrink*! Here are a few of the ways it pays to ship abroad by air:

Swift air delivery opens new markets, spurs repeat orders. Your product is here today, there tomorrow — and *sold* the next!

Air cargo can actually *cut* shipping costs. TODAY, FOR EXAMPLE, NEW LOW PAN AM RATES† LET YOU FLY DRUGS TO PARIS FOR ONLY 41¢ PER LB. (550 lb. min.). Our Drug Shipping Rates to all western Europe have been cut up to 25%. Rates on other

products have been cut as much as 54%. And you pay *no hidden crating, insurance, warehousing or other charges*!

Air cargo shortens the gap between manufacture and delivery, smooths out production flow, speeds up payments!

And with the Pan Am Profit Lift, both shipper and consignee enjoy *the most complete, convenient and cost-saving service ever offered by ANY overseas cargo carrier*.

So give your business a lift—the Pan Am Profit Lift! Call your cargo agent, forwarder or Pan Am *today*.

All this and a "Jet Assist" tool! Only the **PAN AM PROFIT LIFT** offers these five Exclusives:

FASTEST DELIVERY to all the world. No other airline can match Pan Am's number of *direct* flights to and from all 6 continents.

WORLD'S FASTEST, SUREST RESERVATIONS. You can check available space on *any* Pan Am

flight from the U. S. in just 4 seconds, thanks to "PAT"—electronic Pan Am Teleregister. Reserved or unreserved, *all* Clipper Cargo is *expedited*.

MOST EXPERIENCED air cargo carrier. Pan Am handles over 90% more overseas cargo than any other airline. You get *expert* service all the way.

MOST MODERN air fleet. Your goods travel first class when you ship via Pan Am. Up-to-the-

minute equipment includes pressurized and temperature-controlled planes for even the most delicate cargo.

DOORSTEP SERVICE from anywhere in the U. S. Just call your cargo agent, forwarder or nearest Pan American office. Pan Am does the rest, takes goods from factory to market!

AND NOW—more "lift," more service than ever before, thanks to new Jet Clippers!

PAN AM CLIPPER CARGO

FASTEST DELIVERY TO ALL THE WORLD

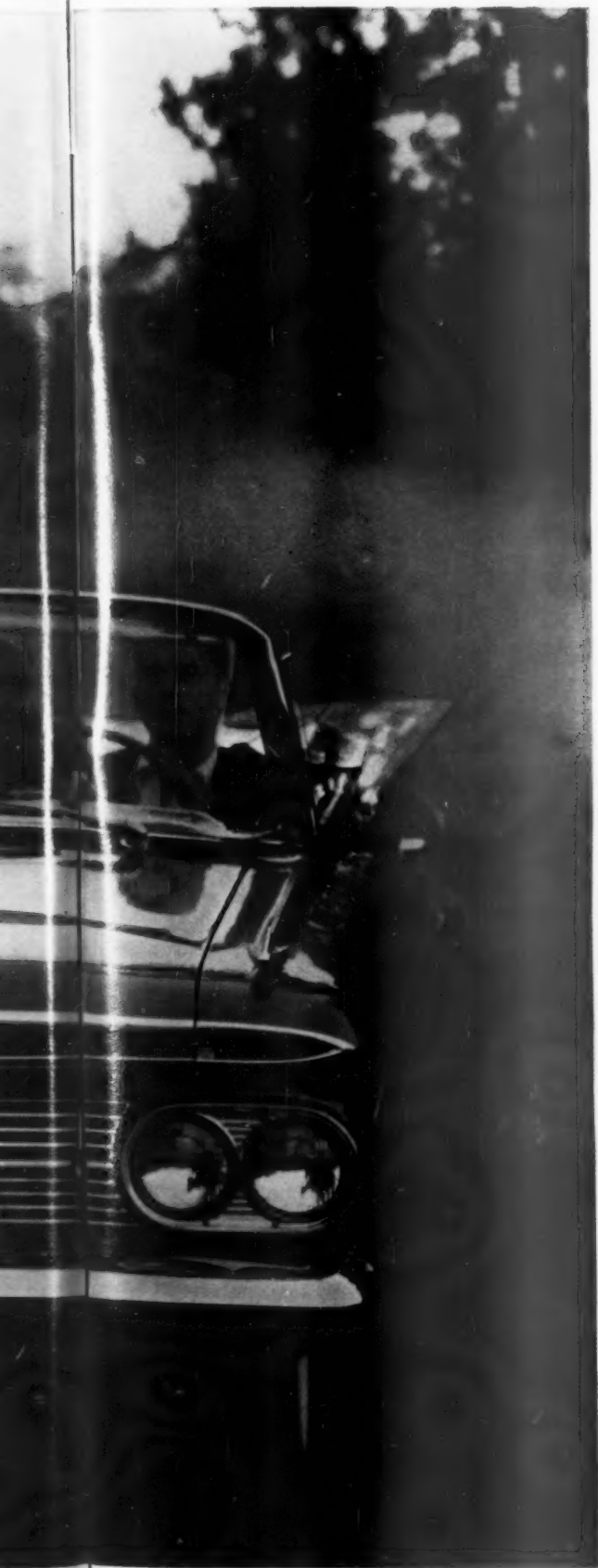


*Trade Mark, Reg. U. S. Pat. Off.

†Effective May 1, 1959, subject to government approval.



Why not take a good close look at your favorite Chevrolet—maybe even an Impala Convertible like this—at your Chevrolet dealer's this week?



CHEVROLET

Even the "price-is-no-object" people see no point in paying more

You've never been able before to get a car like this at Chevrolet prices. Such a smart-looking car. Such a roomy, soft-riding car. Such a beautifully performing car. And when you add those solid Chevrolet virtues of economy, durability and reliability—well, what else is there?

Here are some of the things leading more and more owners of other makes—high priced and low priced alike—to trade for new Chevrolets:

Slimline design—fresh, fine and fashionable with a practical slant.

Roomier Body by Fisher—wider interior, more luggage space, plus that famous Fisher Body soundness.

Sweeping new overhead curved windshield—and bigger windows—all of Safety Plate Glass.

Hi-Thrift 6—up to 10% more miles per gallon, improved normal-speed performance.

Vim-packed V8's—eight silk-smooth versions to choose from, 185 to 335 h.p., up to 11.25 to 1 compression ratio.

Full Coil suspension—further refined for a smoother, steadier ride on any kind of road.

Easy-Ratio steering—brings you reduced wheel-turning effort, new ease of handling.

Magic-Mirror finish—a new type that keeps its shine without waxing or polishing for up to three years.

New, bigger brakes—deeper drums with better cooling for safer stopping and up to 66% longer life.

Triple-Turbine Turboglide, Powerglide and Level Air suspension head a full list of extra-cost options that make for happier driving.

Chevrolet Division of General Motors, Detroit 2, Michigan



The car that's wanted for all its worth!

Experience—the added alloy in Allegheny Stainless



880 Allegheny Ludlum specialists provide service in depth

380 Research and Development men
200 Customer Service men
300 Quality Control men
880 specialists

... far more than any other specialty steel producer and ready to help you on *any* special metal problem.

And remember this: Allegheny Ludlum is the only producer of stainless in all commercial forms in every grade and size. A-L also specializes in: steels and alloys for the electrical and electronics industries; carbides; tool and die steels;

super-alloys for aircraft and missiles, and special exotic metals such as zirconium, molybdenum and beryllium.

Call your Allegheny Ludlum salesman soon. Let him put the right specialists from his 880 engineers and service people to work solving *your* problem ... whether it be for something new, special and different or your steady running requirements for top quality stainless, tool or electrical steels. Take advantage of all this experience. Call today. *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pennsylvania.*

WSW 7441

ALLEGHENY LUDLUM

for warehouse delivery of Allegheny Stainless, call RYERSON

Export distribution: AIRCO INTERNATIONAL

EVERY FORM OF STAINLESS ... EVERY HELP IN USING IT



Crucial Decision on Air Policy

● It's coming as soon as, step by step, our high strategy on bomber and missile retaliatory forces is reviewed in the light of new circumstances.

● The unquenched rivalry among the armed services feeds the debate. Each wants a bigger share of the defense dollar.

● Whichever way the series of forthcoming decisions goes, hundreds of millions of dollars' worth of military contracts are at stake.

Washington's topmost officials—in the White House and the Pentagon—are considering a sweeping change in the way the U.S. would retaliate with nuclear weapons if the Soviets should attack.

At stake are hundreds of millions of dollars in future orders for missiles, manned bombers, and other weapons of all-out war—and big orders for tanks, guns, ships, small aircraft, and other brushfire weapons as well.

Also up for decision are big changes in the size and makeup of our stockpile of nuclear weapons and the selection of targets for them.

Parallel with this high-level discussion of the strategic philosophies best suited to U.S. survival is a bitter fight among the Army, Navy, and Air Force chiefs for a larger slice of defense money. Each knows that most of any increase has to come out of a sister service's hide.

I. High Strategy Debate

The crucial strategic argument around which all the hoorah revolves amounts to this:

• Should we maintain only enough H-bomb-carrying bombers and missiles to knock out the handful of major Soviet centers of population?

• Or should we stick with our present plan to maintain enough planes and missiles to wipe out hundreds of Russian bomber bases, missile sites, factories, and other war-making centers?

The argument of Army and Navy strategists is that the U.S. is maintaining an "over-kill" capacity in the Strategic Air Command—that, far from enlarging this retaliatory force (as SAC

proposes), we can reduce it. The critics argue that we already have the capacity to destroy Russia several times over.

In essence, the critics say, our \$41-billion military budget is not buying the most effective kind of defense. These critics aren't necessarily seeking an overall boost in spending. They want mainly to change the "mix."

No one looks for any single, once-and-for-all decision on this broad issue. But the series of debates and decisions on phases of it will continue to be a key factor in defense budgeting for the foreseeable future.

II. Too Many Bombers?

Under present policy—in effect for the past decade or more—as potential Soviet targets increase in numbers, SAC targeting plans are accordingly broadened. This implies a perennial build up in H-bomb delivery systems—and pressure for steady hikes in military expenditures with little likelihood of ever leveling off.

But Soviet ICBM development—and the assumption that the new missiles will be set up in widely dispersed, underground, and highly secret sites—has compounded SAC's target problems to such an extent that many experts believe that strategic planning has to be overhauled.

• **Bases or Cities**—As Army and Navy strategists see it, our retaliatory policy is a more effective deterrent to enemy attack if we aim our bombers at the enemy's cities rather than his less vulnerable and more numerous missile and bomber bases.

You can blow up all key enemy cities, they say, with a smaller retaliatory force.

Indeed, they say SAC's nuclear arsenal already brims over with surplus "kill" capacity. SAC has more bombers (close to 1,900) under a 105-wing Air Force, they point out, than it would have had (1,780) under the highly touted 1951 plan for a 143-wing force. Since then, too, the bombers have been toting megaton instead of the kiloton nuclear bombs of that era, which had much less destructive power.

All this adds up to an Army-Navy plea for halting or at least slowing down the production of B-52 and B-58 bombers and the development of the B-70, and for diverting those funds to Navy and Army uses.

• **Air View**—The Air Force, needless to say, rejects this argument. Says Gen. Thomas D. White, Air Force Chief of Staff:

"It would be dangerous to alter our national strategic concept to have the capability to destroy only the cities and populations of the enemy."

"The U.S. must be capable of destroying the military power of the enemy. This capability is the foundation of our deterrent posture. This is the only thing that will deter the Soviets from taking aggressive action against our allies and from launching a devastating nuclear attack against the U.S."

The Air Force demands continued bomber production at the same time it is pushing for a stepup in the ICBM program. Indeed, the new budget provides some \$2.4-billion in new orders for procurement of bombers, jet tanker planes, and related bomber equipment, and development of more advanced types. This is \$800-million more than the volume of new contracts planned for the Atlas, Titan, and Minuteman ICBMs.

III. Money Argument

The Army-Navy side of this argument looks attractive to an Administration that's trying to hold down the mounting level of defense spending. Most significantly, the argument justifies Washington's present policy of tolerating a "missile gap"—allowing U.S. ballistic missile output to lag behind estimates of projected Russian production.

But the argument also runs counter to demands for a speedup in ICBM production from Congressional Democratic

critics of the Administration's defense policy.

It is a foregone conclusion that Congress will tack on some \$1-billion to the Administration's defense appropriation request for fiscal 1960—most of it earmarked for increased spending on Atlas, Minuteman, and maybe the Titan ICBM. And this week, Defense Secy. Neil McElroy is considering an Air Force plan to boost production of Atlas from 9 squadrons to at least 16.

IV. Limited vs. General War

The debate over the kind of deterrent force ties in with the other big issue in defense policymaking: Is limited war or general war the more probable threat in the foreseeable future?

A decision to stick completely to the present Air Force policy of "maximum" or "counter-force" strategy would aggravate the controversy over limited vs. general war. It would mean still greater expenditure on big bombers, long-range missiles, and other nuclear delivery systems—presumably at the expense of limited-war capacity.

• **Bringing Crisis**—That's why the debate over deterrent policy is coming to a climax now. The Army and Navy critics are seething over the Air Force's increasing share of the defense dollar.

They want to divert defense money—notably from SAC—to their own forces, which are geared primarily to fight a limited war.

The Army and Navy chiefs argue that the probability of a general nuclear war has become "remote"—as Adm. Arleigh A. Burke, Chief of Naval Operations, puts it—because of the suicidal consequences to both sides. Hence, both Burke and Gen. Maxwell D. Taylor, the outgoing Army Chief of Staff, have long been saying publicly—but politely—that too much is being spent for bombers and ICBMs.

• **Navy Goal**—Burke also objects to the growing investment in continental air defense facilities—he would scale down production of the giant early-warning radars and the Nike and Bomarc anti-aircraft missiles.

He pushes for more Polaris IRBM submarines, on the ground that their mobility makes them less vulnerable and more competent nuclear delivery system than the Air Force's missiles. Just as significantly, he wants to bolster the Navy's limited-war capability—more anti-submarine weapons, more carriers, newer assault ships, more fighter planes, and so on.

• **Army Goal**—Taylor and his successor, Gen. Lyman L. Lemnitzer, are fighting to improve Army combat forces with more troop-carrier aircraft, tactical missiles, tanks, small arms, and related equipment.

The Army parts with Burke, however,

on the air defense question. Army men call for an increased program—and an increased role for Army missiles. In addition, they're skeptical about the Navy's aircraft carrier efforts.

V. Military Unification

The continued inter-service military bickering over major policy issues is evidence that last year's highly-touted Pentagon reorganization, which was supposed to strengthen military unification, has been something less than a success.

During the Senate Preparedness subcommittee's recent round of hearings on the defense program, the Democrats were dismayed to learn that the latest defense budget was drafted under traditional Pentagon procedures, that last year's reorganization law had much less than the expected impact on budget-making.

• **Each for Himself**—As the budget was prepared, each service was given a budget allocation, then was directed to draw up its own priority projects within this sum. There were no inter-service decisions to set across-the-board Defense Dept. priorities.

There was little if any consideration, for instance, as to the strategic value of "X" numbers of Air Force ICBMs or advanced bombers vs. "Y" numbers of Navy Polaris IRBM submarines. The Air Force was allotted a specific sum, decided on its own how many missiles to buy within this amount. Likewise, the Navy decided on its own the number of missile subs it could afford within its budget allocation.

Revelation of this system prompted Majority Leader Lyndon B. Johnson, who heads the subcommittee, to snort: "Whatever happened to military unification?"

• **Functional Grouping**—Many defense experts are coming around to a theory that the military services should be grouped according to function—that forces to handle offensive action in a limited war should be under one commander, forces to fight the big nuclear war should be under one commander, and so on.

That's what is behind the Air Force's controversial proposal that the Navy's missile-carrying subs and carrier-borne attack planes be placed under the same general command as SAC's land-based bombers and missiles.

The Navy is fighting hard against the plan, which Defense Secy. McElroy is now considering. Navy men argue that their forces are trained and equipped to fight small tactical wars as well as the big nuclear war. As they see it, putting such a large segment of their fighting forces under the command of an Air Force general would cut their combat effectiveness.

"I DON'T for a moment believe the steel industry has the unity to carry it through, but I'm convinced the idea is perfectly legal."

That's the reaction of a corporation attorney who's widely versed in anti-trust law to the steel industry's disclosure that the stronger companies may support the weaker financially if there is a strike this summer.

Steel's startling disclosure came from its principal negotiator last week. R. Conrad Cooper, executive vice-president of U. S. Steel and head of a four-member industry bargaining team, said steelmakers are considering, although not too seriously, a mutual aid pact to be used if the United Steelworkers strikes some but not all producers after June 30.

• **What's Involved**—A day later, and while the USW complained to the U.S. Justice Dept., Cooper seemed to back away from the idea. In spite of his diffidence, though, the concept is alive. This week, it stood just about here:

• Industry attorneys are studying the legal and mechanical aspects.

• Exactly what form such mutual assistance would take—aside from the fact that it would be financial—isn't known. It might be loans, it might be outright grants. It might be based on a contributor's position in the industry by capacity, number of employees, or otherwise. Whatever mechanics are evolved will be governed first—if the plan materializes at all—by what is considered legal, only thereafter by practicality and impact on stockholders.

• At least some industry leaders believe a legal mutual aid program can be evolved.

• If such a program is agreed to, it might be used against a selective strike, or to shore up a beleaguered company in a protracted industrywide strike, or it might not be used at all except as a standby to checkmate USW strategy.

• As it stands now, it's in no sense a profit-sharing move.

• It wouldn't necessarily be limited to the 12 companies now involved in joint bargaining over a new steel labor contract.

• **The Purpose**—What steel leaders are studying—and would like to bring to life—is a solid front strong enough to dissuade the USW from attempting to win its substantial wage and fringe demands by concentrating its strength against a few producers and prevent that strategy from succeeding if tried.

• **Airline Pact**—As it's now visualized, this steel industry concept is a far cry from the existing pact under which six airlines exchanged abnormal earnings,

Mutual Aid Proposal

● Steelmen are exploring the idea of extending financial aid to producers who might be forced to break ranks.

● But apparently no concrete plan exists yet. Legal and mechanical problems present formidable hurdles.

● But such a pact would lessen the possibility of weaker companies yielding to USW bargaining demands.

last winter, when several of them were struck (BW—Nov. 8 '58, p25). That program, which won tentative Civil Aeronautics Board approval, provided in effect that: (1) No participating airline would profit from a strike against another participant; and (2) cash payments by one participant to another would be limited to earnings, in excess of incremental costs, traceable to a strike; and (3) only illegal strikes or those in which demands "exceed or conflict with" recommendations of a Presidential emergency board would bring the mutual aid pact into play.

Under that one-year agreement—which any other airline could join quite readily—more than \$4.9-million was paid to three participants, Eastern, Capital, and Trans World Airlines. Pan American, United, and American Airlines paid almost \$4.4-million of that amount.

• **Sugar Agreement**—Steelmakers have another example of mutual assistance to study. That's an agreement among 26 Hawaiian sugar producers to compensate each other in part for losses resulting from last year's strike (BW—Jun. 28 '58, p59). That pact differs even more widely than the airline agreement from what the steel industry has in mind. But each has this similarity to steel's problem: It made possible the effective pooling of industry strength. It made it impossible for an industry-wide union to compel a single employer to submit.

At first glimpse, the idea of a mutual assistance pact among steelmakers seems pretty unreal. That's because it was first disclosed as a prospective offset to any "divide and conquer" move by the USW in which one or more producers would be struck while most of the industry continued to operate.

• **USW's Policy**—Traditionally, the USW does not operate that way. Its policy is simple: No contract, no work. Upon federal urging, it has, not infrequently, extended contracts pending protracted negotiations—once for more than six months.

But substantially all its agreements with basic steel producers terminate simultaneously. And only most infre-

quently does it happen that one or more producers are without contracts when the industry as a whole has reached a new agreement. Never, since it got basic steel substantially organized late in 1941, has the USW struck a part of the industry to force a new contract on the whole. That possibility is a traditional item about which reporters speculate each time a steel labor contract negotiation arises. But there is no more reason to believe that it will happen in 1959 than there ever was.

• **Steelmakers' Thinking**—Are the steelmakers, then, erecting a strawman to bluster against? Not a bit. Their thinking runs this way:

• They are determined to win the kind of contract they want in 1959.

• Since the selective strike tactic might be used against them in the event of a contract extension, a defense should be available.

• If weaker producers felt they had to give in during a protracted industrywide shutdown, such a defection must not enable the USW to write a contract that would put the industry's employment costs up.

Steel industry leaders, in short, feel that if a legal mutual assistance pact can be evolved, it should simply be there if needed. If unused, nothing will have been lost but the effort.

• **Termination Issue**—As they did three years ago, the steel producers who bargain jointly have filed notice of termination for the existing contracts effective June 30. In 1956, they refused an extension because USW insisted that any settlement be made retroactive. If USW made the same offer this year, steelmakers would be hard put to refuse. Their whole bargaining position is that employment costs must not go up one penny. So long as they hew to that, retroactivity can't cost them any money.

Thus, if the contract were extended, the opportunity for a selective strike would arise. Only in such a case would a major producer anticipate any help from the rest of the trade. Otherwise, the financial commitments of the participants would be reserved for pro-

ducers not able to pile up enough cash to weather a long strike.

• **Strike Prospects**—You can argue that this concept, too, is as unreal as the prospect of a selective strike. For example, in 1952, Pittsburgh Steel signed a contract well before the strike had run its 55-day course. And its defection caused the rest of the industry no difficulty, for Pittsburgh merely agreed that it would sign whatever basic agreement ultimately was reached.

Now, if Pittsburgh Steel were forced to capitulate again, there's no particular reason to believe the USW would force it to write a cost-boosting contract it could then take back to the other producers.

• **Legality**—Would such a pact be legal? That, of course, is any attorney's guess. A corporation counsel with vast antitrust experience is sure that it would be. His view: The antitrust laws are directed to sales competition among competitors. They do not forbid joint action by competitors on numerous other aspects of business—such as labor agreements, insurance programs, research and development, safety.

Within the Justice Dept., though, there are attorneys who say flatly any plan to share earnings would be a violation. Such comment, however, is beside the point steel has in mind. If steel establishes such a pact, its funds won't be based on, or restricted to, earnings—at least not according to the thinking that's been done so far. Most, if not all, the principal producers have been maximizing cash. One anticipates having enough to offset its predictable losses for 12 months. If called upon to aid a hard-pressed competitor, it would not have to rely on current earnings.

USW's reaction, naturally, is that any such pact would be illegal. Indeed, USW General Counsel Arthur J. Goldberg complained to Atty. Gen. William P. Rogers that mere examination of such an idea—which is what Cooper said had taken place—demonstrates a conspiracy to violate antitrust law.

• **Justice Dept.'s Position**—Officially, the Justice Dept. takes the position that since it has seen nothing in writing on such a pact, it has nothing to say.

Less formally, there seems to be some sympathy at Justice for the industry's attempt to neutralize the monolithic impact of the Steelworkers. But the speculation in Washington seems to be that such a plan is unlawful and that industry attorneys will make that plain to their principals.

Whatever the official interpretation of the law proves to be, it's ironic to ponder this possibility:

Several steelmakers, acting in concert to finance one or more hard-pressed competitors and keep them alive to compete again another day, might be held to be in restraint of trade.



ADMINISTRATION moves toward tax reform are in charge of Treasury Under Secy. Fred C. Scribner, Jr. He will prepare any proposals to go to Congress in 1960.



ACTIVE ROLE in Administration studies is taken by economist Henry C. Wallich, who moved this week from Treasury post to President's Council of Economic Advisers.



COMMISSION for broad tax study is proposed by Sen. Alexander Wiley (R-Wis.). He filed bill for 12-member group to represent White House, Senate, and House.

Tax Reform Gets Popular Again—

Financial omens will be favorable, but as yet there's no agreement on what kind of reform, or how to get it.

In the swashbuckling days of the past, tax cuts carved out with a meat axe were an accepted device to try and win elections. No more.

Fiscal responsibility is the watchword now with both Republicans and Democrats. Yet the mouth of the office seeker waters at the prospect of lightening the tax burden before a major election—call it reform, revision, or reduction, just so it's responsible.

This alone is enough to guarantee a present flurry of tax speculation, with the 1960 White House race in mind.

But in addition, by a happenstance of the business cycle, the best of all conditions for overhauling the tax structure in a responsible manner seems about to come true.

Revenues are rising from the powerful business upswing, spending is being held down close to what the Administration hopes for, and budget surpluses are again a reasonable likelihood (BW—May 9 '59, p23). This provides the headroom most tax reformers always say they need.

• **Block to Growth**—Moreover, there is general agreement that the present patchwork of basic legislation—most of it put together in a slapdash hunt for revenues during World War II—impedes growth in a variety of ways. Even ultra-liberals among the Democrats agree that some provisions needlessly hamper business and should be changed.

The tax structure is criticized as par-

ticularly ill-suited to the problems raised by the cold war and Russia's rising economic challenge. An overhaul of taxes to suit the needs of the 1960s is hailed almost everywhere in Washington as a useful device at least, and in some quarters as essential.

• **Spadework**—Behind the talk, there is even some quiet spadework going on:

Treasury experts are canvassing the situation. In January, Eisenhower all but promised tax reform next year if a surplus appears likely. He instructed Treasury Secy. Robert B. Anderson to draw up plans. Treasury officials say their studies are continuing, and admit that the conditions laid down by the President seem more likely every day to be realized.

Under Secy. Fred C. Scribner, Jr. (pictures), in charge of the Treasury's tax studies, will prepare whatever recommendations the Administration decides to make. Henry C. Wallich, who moved this week from the Treasury's top economics post to a place on the President's Council of Economic Advisers (BW—Apr. 25 '59, p30), has been working with Scribner. He will continue to play an active role in tax policy.

In the Ways & Means Committee of the House, where tax legislation originates, there is also a stirring. Committee Chmn. Wilbur Mills (D-Ark.), long an advocate of rewriting the Revenue Code from top to bottom, has

brought in a tax reform specialist, Norman Ture, formerly with the Treasury and more recently a member of the professional staff of the Joint Economic Committee of Congress. Mills and Ture are old associates.

Members of the Ways & Means Committee say Ture is exploring the present situation for Mills. They believe he will be asked to stay if a major reform program seems feasible.

• **Roadblocks**—But for all these omens, tax reform is far from an odds-on bet.

For one thing, Mills and the Ways & Means Committee are swamped with a heavy burden of routine.

Their schedule is loaded with such highly important matters as a new renegotiation act, extension of present corporation and excise tax rates, how to raise money for highways, an expected request to raise the debt ceiling, liberalizing of taxes on income earned by U. S. corporations abroad, technical questions regarding corporate reorganizations, estates and trusts, and partnerships; the Administration's request to increase the tax take from cooperatives, and revision of statutes covering depletion allowances for minerals.

"Mills would like to think he's clearing the decks for the basic reform study he wants to make," one Administration official says, "but actually he's not getting any closer. The committee will be exhausted by the time Congress goes home and won't want to tackle anything as ambitious as Mills has in mind."

• **What Kind of Reform?**—This is not the most important question hanging over tax reform, however.



SPECIAL TARGET of Sen. William Proxmire (D-Wis.) is 27.5% oil depletion allowance. He has a bill to lower it ready to offer at first opportunity in tax debate.

for 1960

There are basic differences of opinion about what kind of reform should be sought, and how. There are even doubts as to whether it should be sought at all, no matter how inviting the budget situation becomes. Here's a quick look at the chief ideas that are splitting Washington policymakers.

I. Just Token Reform

One group wants no reform at all—or at most only a token.

This is really a novel defense of the Administration's present goal of budget surpluses at all costs.

The plug for it starts by admitting most of the evils laid to the tax structure, but winds up by saying that after all these do not amount to much in an economy that is rapidly expanding toward the \$500-billion mark. Rather than lower revenues even a few billion dollars as the price of reform, these men would prefer to see surpluses built up and the public debt reduced.

• **Reverse Twist**—"You'll get more growth from the burst of confidence this would create than you will by lowering taxes," one proponent puts it. Though basically a conservative and friendly to business, he does not see the 52% corporation tax rate, the 25% top rate on capital gains, or even the top-bracket 91% personal income rate, as the most important impediments to new investment and growth. He thinks high interest rates are more harmful.

"Instead of loose budgets and tight money," another top Administration thinker suggests, "why not try tight

budgets and easier credit." He argues that one reason the Federal Reserve has had to tighten up on credit repeatedly in recent years is the inflationary impact of budget deficits. If the budget should now produce a series of surpluses—thus releasing savings into the private investment stream—he believes interest rates could be allowed to drop.

Wallich, in a recent talk at the University of Michigan School of Business Administration, ranged himself on the side of those who believed budget surpluses would make a more positive contribution to growth than deficits. He also argued that the case for tax reform as a growth factor is usually overstated.

This approach is "intriguing," a skeptic admits—then hastens to add, "But you've got to figure on Congress—and Congress isn't going to hold down spending in order to reduce the national debt."

• **Prospect**—A token amount of reform may be recommended by the Administration in next January's budget messages. Some Administration experts believe the greatest economic thrust would come from a combination of more liberal depreciation allowances, a reduction of the top personal income tax bracket, and some easing of the capital gains tax.

II. Reform by Rate Cuts

This approach, backed by the National Assn. of Manufacturers and regarded with sympathy by some Treasury officials, sees existing high rates as the source of most tax troubles. Cut the rates, backers say, and all sorts of unhealthy pressures will disappear. Special groups such as farmers, the self-employed, and cooperatives would ease up on demands for preferential treatment. More savings would be channeled into risk ventures.

Rep. A. S. Herlong, Jr., (D-Fla.) and Rep. Howard H. Baker (R-Tenn.), members of the Ways & Means Committee, are sponsoring a bill that would reduce personal and corporate income taxes over a five-year period. They would bring the top personal and corporate rate down to 47%.

The bill has not been scheduled for hearings, and its chances are virtually nil. Neither the Democratic leaders of Congress nor top policymakers in the Administration are for this.

III. Base-Broadening

The strategy of reform by broadening the tax base is the one favored by Mills. He sees erosion of the base as the main problem, as Congress votes one exemption after another to special groups.

The bill adopted by the House this year to aid the self-employed is a case

in point. And earlier, during a major revision of the Revenue Code in 1954, a half-dozen new areas of erosion were established: special treatment for sick pay, for expenses of widowed mothers who must hire baby sitters, for the elderly, for recipients of income from dividends.

Mills grants that the underlying reason for such pressure is high rates, but insists that the solution is to examine all such special provisions, and drop as many as possible. This would broaden the base enough to permit reductions in rates.

• **"Too Tough"**—The political problems here are enormous.

Mills hopes he can minimize pressures by first calling in tax experts in panel discussions, or by assigning given subjects to carefully selected task forces.

"I've seen both methods used and neither will work this time," a veteran of the tax wars in Washington predicts. "Mills is on sound ground in principle, but he'd be better off to buy the idea of reform by simply cutting rates. Base-broadening is just too tough—try taking tax privileges away from working mothers and the old folks."

Base-broadening is attracting some of the Democratic liberals as a means of pushing ideas of their own. Sen. William Proxmire (D-Wis.), for example, has a bill ready to offer as an amendment to the first tax measure that reaches the Senate floor. Its purpose is to lower the present oil depletion allowance of 27.5%. Mills and the other tax reform advocates oppose piecemeal moves of this kind.

IV. The Commission Way

Contemplating these difficulties, some advocates of reform—attorney Joel Barlow, chairman of the U.S. Chamber of Commerce tax committee is one—favor a top-level commission as a starting point. They believe it is the only practicable way of keeping Ways & Means from getting bogged down.

A bill calling for a combined White House-Senate-House commission of 12 members to undertake a broad tax study has been filed by Sen. Alexander Wiley (R-Wis.). A similar bill presented last year by Wiley drew wide support from business executives, but never got anywhere in Congress. The implication that the regular tax-writing committees need help is enough to steer most lawmakers away.

There's support for the commission approach among some Administration officials, but they feel their hands are tied. They have to work with Mills and with Sen. Harry Byrd (D-Va.), chairman of the Senate Finance Committee, to keep up with the bare routine of legislation. Mills in particular has spoken out against a commission.

Auto Show Goes to the Races

Potential customers get more chance to take cars for a spin around a real track at Roosevelt Raceway.

This week, the automobile finally took over the last stronghold of the horse—the race track at Long Island's Roosevelt Raceway. The latest models of 35 foreign and U.S. auto makers rolled out on the trotting track for what is billed as the world's most active auto exhibit.

The World Car Show offered something unique. It gave distributors the chance to get their gleaming new horseless carriages out of their static showrooms, and to demonstrate them by taking prospects on a test spin around the track.

• **New Setting**—Spectators drove in to the 16,000-car parking lot, paid \$1 a head to view—and to drive—the cars in the exhibit. They swarmed into the grandstand building to the main betting floor, where stationary models were on display. Most evidences of the betting floor's normal activities were discreetly covered up. Datsun, a Japanese company, festooned the shrouded parimutuel windows in its

display space with sprigs of cherry blossoms.

Salesmen urged interested viewers to sign up for a trial run around the track, then went along to serve up a sales spiel while their prospects drove models around the Raceway. Back at the grandstand, the salesmen pursued their sales pitch according to prospect's interest.

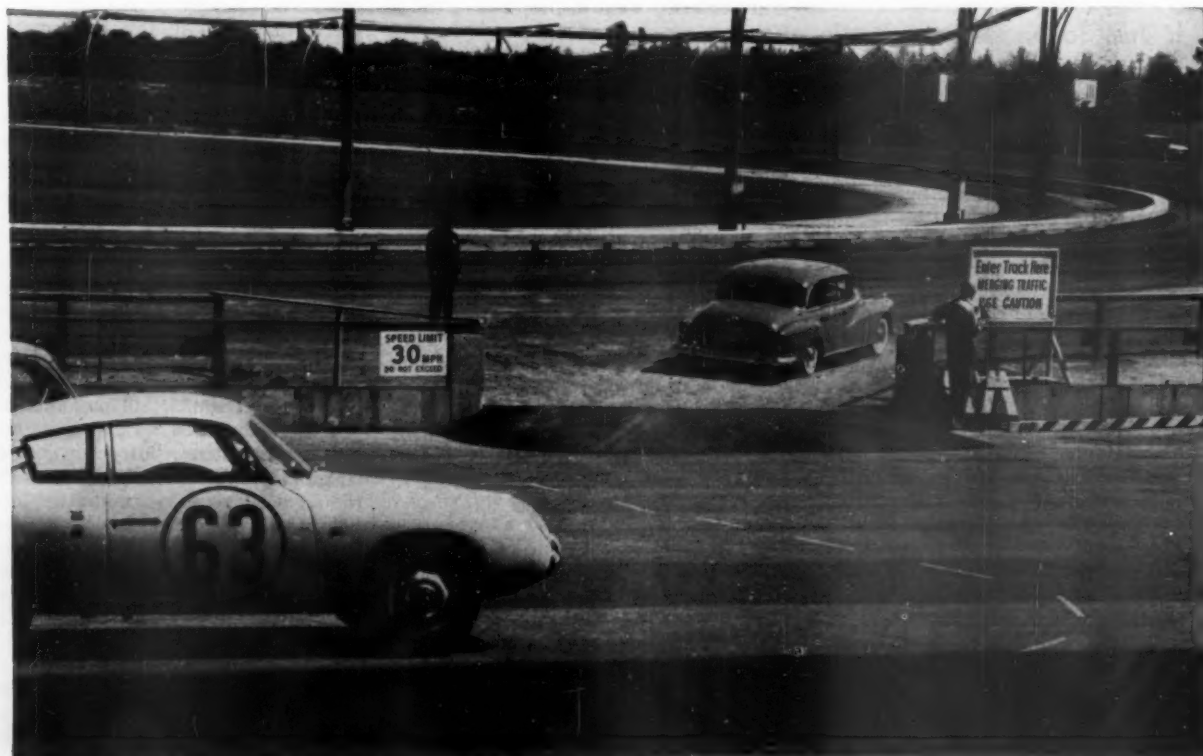
• **Approaches**—The various companies represented handled the selling opportunity in various ways. Mostly, U.S. exhibitors treated the show as a general promotion, while many foreign makes drove hard for on-the-spot sales. Buick people used the perfunctory liability release forms—which had to be filled in by all spectators before taking a test drive—to develop prospect lists for local dealers. Buick also intends to analyze dealer reports on follow-up results, both from a market research standpoint and to evaluate the final sales value of participation in this type of show.

Simca official Edmund Lahair acknowledged that "We're selling hard from the moment they get near the display until they either buy or walk away." He considers the drive-it-yourself feature a big improvement over regular exhibitions, "where the models just sit there static on the floor and

you draw a lot of sightseers who aren't real prospects." Lahair also likes the fact that most spectators drove their own cars to the show. "You can go right out to the parking field and nail down a deal on the trade-in," he says.

• **Off Season Bet**—For Roosevelt Raceway, as well as for the auto companies, the show is something of a departure. The Raceway, a corporation listed on the American Stock Exchange, invested \$19.6-million to build up one of the plushiest plants in the race track business. During its four-month harness racing season, this investment produces a handsome return. But that's a heavy investment, with the attendant overhead, to lie idle for eight months of the year. So the raceway is seeking expositions to utilize its plant during the off-season.

The car show is its first big venture into this field. Besides admission revenues, the Raceway gets \$2.75 to \$3 per sq. ft. rental for display space. Having sunk about \$75,000 into promotion for the show, the Raceway would be happy just to break even this year; but hopes to establish the car show as an annual affair. It points out that surrounding Nassau County ranks No. 2 (Los Angeles is first) as a two-car-family sales area.



AMONG THOSE PRESENT. In the foreground is a Fiat-Abarth sport coupe. Mercedes Benz 300D (center, rear) weighs in at \$10,000.



DETROIT GETS IN THE ACT with a Buick, at the show primarily to help build up a list of prospects, rather than for quick sales.

TOTE BOARD at the Roosevelt Raceway shadows a Goggomobile, German contribution to the ultra-small car field.

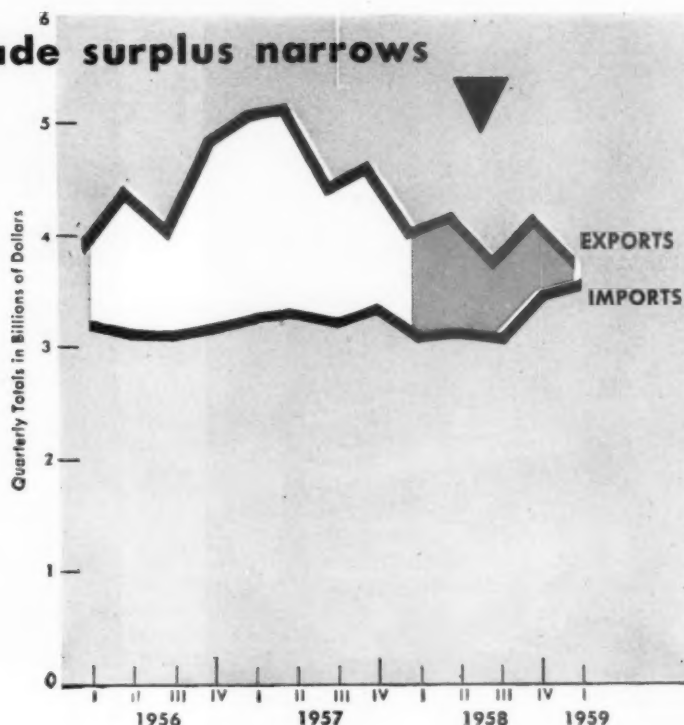
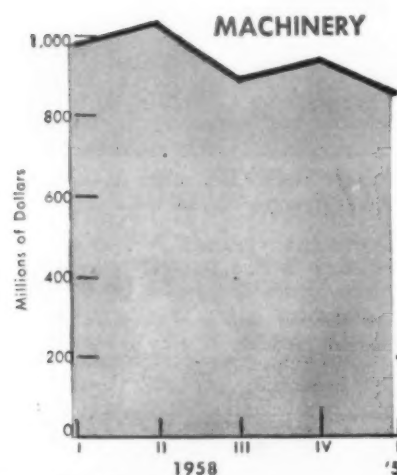


SALESMAN (standard size) towers over a Datsun, Japanese family-style sedan comparable in size to the Volkswagen.

BRITAIN leads in sports car sales in the U.S. Here are an MGA (foreground) and an Austin-Healey.

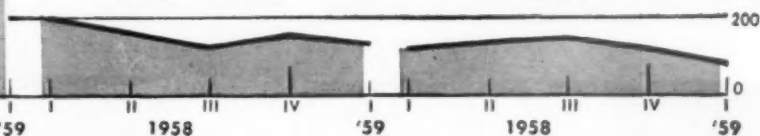
U.S. trade surplus narrows

As exports decline in products like these ▼



IRON & STEEL

COAL



Data: Dept. of Commerce.

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Is the Lag Basic or Cyclical?

Trade experts, in and out of the government, disagree, though the majority think exports will pick up by yearend. If they don't, everyone concedes, the crisis will be serious.

The level of exports has never given the U.S. government much cause for worry since World War II. In fact, in most of the postwar period U.S. sales abroad have been so far above U.S. imports that Washington was more concerned about encouraging sales of foreign products in U.S. markets. It hoped in this way to get a better balance in our trade, to close the so-called dollar gap.

Today the attitude of the government's trade specialists has almost reversed. Officials watch the rise in U.S. imports with some concern, and they positively worry about the sluggishness of our exports.

Above all, they are alarmed by the shrinkage of our trade surplus (chart)

to the point where our total international receipts fall far short of our total international payments. This deficit—already large last year—is primarily responsible for the recent drain on our gold reserves and the talk of weakness in the dollar (page 119).

• **Story in Figures**—Official trade statistics just released for the first quarter suggest that this year's total payments deficit may be even bigger than last year's. Our sales abroad haven't picked up as trade officials had hoped when the year began, while our purchases from abroad have risen even faster than expected.

First-quarter figures show exports of nonmilitary goods of \$3.8-billion and imports just under \$3.6-billion. That

gave us a trade surplus of just a shade over \$200-million, compared with \$900-million in the first quarter of 1958, a year when exports didn't do any too well.

Estimates of the Commerce Dept. and other agencies for the whole year don't make any better reading. These forecast exports at between \$15-billion and \$16-billion for all of 1959, imports at \$14-billion or slightly more. That would give us a trade surplus of, say, \$1.5-billion—which is less than half of last year's surplus.

These export-import figures are only part of the picture for total international payments. To figure our total payments for 1959, you have to allow also for net payments on services, the net flow of U.S. private capital abroad (this year well below last year), part of foreign economic aid (most of which carries exports with it), and U.S. military spending abroad.

When you add in the estimates for

these items, you wind up with a 1959 payments deficit of \$3-billion to \$4-billion. That's in the area of last year's \$3.3-billion deficit that led to a loss of \$2.3-billion from our gold reserves.

U. S. officials don't expect the gold loss to be nearly so high this year (up to mid-May it was about \$300-million), but they don't like the looks of the big over-all deficit that's booming again. And they are concerned over the failure of U. S. exports to start making a comeback by now.

Trade experts in Washington and New York don't by any means agree on the nature and gravity of the situation. They divide into two schools: (1) the Pessimists, who say the change in our export position is structural and more than temporary, and (2) the Optimists, who say the trouble is cyclical and has about run its course.

I. The Pessimists

Essentially, the Pessimists are saying U. S. industry may have lost its competitive strength, may have "priced itself out of world markets," to use a phrase that's common in business circles today.

The Pessimists, still a minority in Washington, see the U. S. decline in exports as more than temporary. It has spread, they say, from raw materials such as coal (which Europe couldn't be expected to keep on buying indefinitely) to many types of manufactured goods including machinery (chart).

They ascribe this new weakness to an accumulation of factors:

- Western Europe and Japan are not only back in business but also operating from a much stronger, more competitive industrial base than before World War II. Economic integration in Europe through the Common Market is increasing the competitive pressure on industry there.

- With wages much lower than ours and plants and technology in most cases as good as ours, Europe and Japan can often price capital equipment lower than we can. Purely on a basis of price, some big U. S. oil companies in Venezuela now buy much of their equipment in Western Europe rather than in the U. S. Officials in India say our prices are often 30% higher for comparable equipment.

- During last year's recession, at least one big U. S. industry—steel—followed a less flexible price policy than its rivals across the Atlantic. By shaving prices, the big steel companies of Britain and Western Europe unloaded inventory on a large scale during the past year.

- The migration of U. S. industry abroad has led to an indeterminate amount of substitution of foreign-based

production for what used to be U. S. exports and has also contributed to the rise in our imports.

- **Industry Concurrence**—The view that we have lost our competitive edge finds support in U. S. industry. A fabricator of copper and brass products, for example, will cite chapter and verse to show that the domestic brass mill industry doesn't stand a chance in foreign markets against German and British competition—and he'll add that it has tough going even in the U. S. market under present tariff rates.

The Copper & Brass Research Assn. has just published a study showing how, in the last few years, the industry has lost its export markets and a substantial part of the U. S. domestic market (23% in the case of alloy seamless tube) to foreign competitors. According to this study, German and British mills have equipment at least as good as ours, and a wage advantage that's growing all the time.

II. The Optimists

The majority view among trade specialists, in or out of the government, denies any general or critical loss in the ability of U. S. exports to compete. The Optimists lay the current export decline almost entirely to cyclical factors:

- The end of the European boom in late 1957 caused a drop in demand for U. S. capital goods and industrial materials. It also led to the unloading of large European and Japanese inventories of coal, steel, and nonferrous metals, accumulated when business was at its peak.

- During the industrial slowdown both here and in Western Europe, the countries producing primary products lost much of their export income, hence had to cut their purchases in the U. S.

- **Working Itself Out**—By the end of this year, say the Optimists, this cycle will have worked its way out. Western Europe is heading into another period of expansion and will need more U. S. goods, both raw materials and manufactures. Canada, our biggest customer, will be buying more this year, as business activity picks up there. Then, raw cotton exports are expected to boom again this summer when lower prices announced by the Commodity Credit Corp. come into effect. Buyers have been holding off in anticipation of this price cut.

As their own sales improve, commodity producers, especially the underdeveloped countries, should soon be able to buy more goods from us. Besides their earnings from sales of primary products, they are getting a lot of financial aid from the big industrial nations.

- **Price Edge**—As for our supposed price handicap, the Optimists see no con-

vincing evidence of its effect on a wide range of manufactured goods.

Some U. S. studies indicate that U. S. prices for machinery have risen more than those of Britain and Germany, even though price inflation at the retail level has not been so great here. But a recent British study, published in the National Institute Economic Review, reveals that in exports of manufacturers as a group, Britain has gained only a tiny price edge over the U. S. since 1953 and West Germany not a very great edge.

In fact, the Economic Review concludes, there is "little evidence that U. S. prices of manufactures have suddenly become too high, least of all in relation to British prices."

- **Possible Danger**—One U. S. official who argues that no drastic measure will be needed to bring our payments into balance admits he still has one fear: that the deficit in our balance of payments may force our government to follow a more deflationary policy domestically than it otherwise might.

This, he says, could lead European governments to keep a damper on expansion, in turn cutting purchases from the U. S. This kind of competitive deflation among the more advanced industrial countries could hurt the economic prospects of the underdeveloped nations.

III. What They Agree On

Among the trade experts in Washington, both the Optimists and the Pessimists agree on two points:

- This will be a critical year for U. S. foreign trade—one that should prove fairly conclusively whether the lag in U. S. exports is structural and basic cyclical and temporary. Even the least worried officials concede that if there's no sign of an export upturn by the end of the year, the crisis in our balance of payments must be considered serious.

- Whatever the cause of the current imbalance, the best remedy is to export more, not to try to cut down our imports by raising our tariff walls. A protectionist solution, say U. S. officials in both schools of thought, would only make the U. S. still less competitive in foreign trade.

There's general agreement, too, that our imports will level off by the last quarter of the year. Officials point to the impact of oil import quotas, to the drop in coffee prices, and to other factors such as Detroit's decision to build smaller cars to compete with foreign makes.

However, total imports of manufactured goods are expected to remain at current levels, while imports of nonferrous metals are expected actually to increase as U. S. industrial production continues to pick up.

Fed Tightens . . .

. . . rules on stock margins, ignoring protests from Wall Street; but it leaves one loophole.

Indicating its continuing concern over the stock market, the Federal Reserve Board announced this week that it is going ahead with its plans to cut down on the amount of credit available for equity purchases. Effective June 15, it will impose stricter regulations on margin buying of listed stocks, along the lines of proposals made in March (BW-Mar.21'59,p138).

Wall Street was a bit taken aback. The financial community had protested the proposed changes as likely to lead to a contraction of credit that might produce a much "thinner" and more volatile market (BW-Apr.11'59,p116). Bankers and brokers asked the Fed to hold public hearings.

But the money managers went ahead without any hearings. They did, however, make one important concession: Traders selling securities in "restricted" margin accounts—accounts with stock bought before the present 90% margin rules went into effect—will not be subject to any change in regulations provided they buy other stocks of like value on the same day. Some brokers say this leaves a gaping loophole.

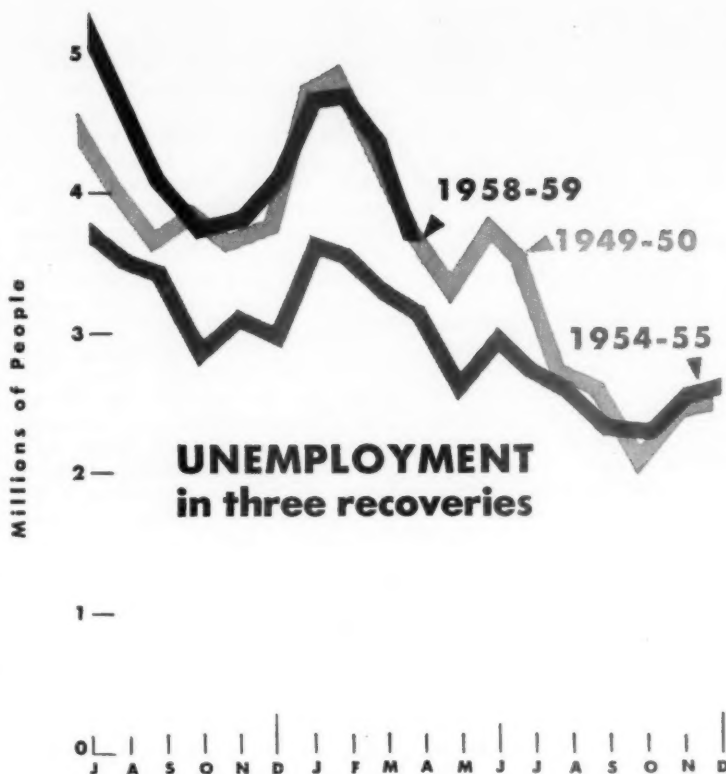
• **New Rule**—Here are the main points in the Fed's new regulations:

- A trader selling stock in a restricted margin account must apply 50% of the proceeds (the present rule is 10%) to pay down his loan until the 90% margin is reached.

- Holders of convertible bonds who wish to convert into common stock must get up 90% cash within 30 days; today, investors can buy convertibles on 10% margin, and convert without more cash.

- Banks making "non-purpose" loans—loans with stocks as collateral, but ostensibly not for the purpose of purchasing other stocks—will require signed statements from the borrower and loan officer that the loan won't be used for such purposes. Bankers complain this makes them "FBI agents."

- **Effects**—Brokers claim it is too early to tell just what the new rule will mean for stock prices. The two most important forces in the market—the cash-buying institutions, and the "quick" traders—are apparently unaffected. But the new rule may "freeze" a great many margin investors in their present positions, and over the long run, bring about some contraction of credit. By itself, it is unlikely to change the direction of stock prices.



Data: Dept. of Commerce.

©BUSINESS WEEK

More Idle Hands Find Work

Labor Secy. James Mitchell vowed to eat a hat if unemployment failed to drop below 3-million by October—but the sharp April decline reported by the Census Bureau makes it look certain that his digestion will be spared.

The chart above shows that April's jobless figures continued a trend that has been evident all year: They paralleled the statistics for 1950, when unemployment decreased at a record pace, partly with the help of the Korean War.

April's count of 3,627,000 unemployed was such an improvement that the Census Bureau projected the October figure at about 2,875,000 on the basis of seasonal changes alone. Seymour Wolfbein, Mitchell's newly appointed deputy assistant, forecast that continued business recovery would make the total even lower.

- **Where Jobs Gained**—A burst of spring activity in agriculture and construction was chiefly responsible for April's 735,000 dip in joblessness. But most parts of the economy shared in the gain as total employment climbed to 65-million, a new record for the month. This was 1.2-million better than March and 2.1-million healthier than in the previous April.

The number holding nonfarm jobs rose 540,000 to a total of 59.2-million.

This April surge coupled with March's added up to an increase of more than 1.1-million—the biggest improvement in nonfarm jobs for the two spring months since World War II. The chief factor was a jump of 225,000 in construction jobs, credited to better building weather. But a contraseasonal net gain of 30,000 in manufacturing employment was regarded as equally significant. Jobs in nondurables slipped seasonally by 45,000, but in hard goods they went up 75,000.

One of the ingredients of this gain was a 25,000 upturn in primary metals jobs, stemming from high steel production. But the gain was even bigger in the rest of the hard goods sector.

- **Still Some Worries**—Despite all this, the fact remains that 5.3% of the labor force is out of work. This is more by a good margin than the 4% regarded as normal. And as job conditions improve, more employable persons will join the labor force and swell its ranks.

Moreover, recovery has been uneven. Two out of every five jobless workers in April had been unemployed more than 15 weeks. The unskilled, the aged, and Negroes are still slower than others to return to payrolls. And employment in hard goods and transportation remains below 1957 levels.

Defense Weapon

The telephone is a defense weapon—and an important one.

A manufacturer of rockets, for example, needs data or delivery on a specific part. He picks up his telephone, makes several Long Distance calls, and his problem is solved.

An unidentified aircraft is detected in flight by a radar installation. The information is relayed automatically and instantly over telephone cables to a defense center.

It is then flashed over the network of special Bell System telephone lines which link the country's entire system of continental defense.

The role of the Bell System does not stop there or with the thousands upon thousands of calls that are a part of the manufacture of countless items of defense.

Its Bell Telephone Laboratories are engaged in many important research and development projects for the government. These include the Nike Zeus anti-missile missile system and the guidance system for the Titan

intercontinental ballistic missile.

Western Electric, the Bell System's manufacturing and supply unit, is producing the guidance and control equipment which is the heart and brains of the mighty Nike Ajax and Nike Hercules missile systems.

The Sandia Corporation, a subsidiary of Western Electric, continues to manage the Atomic Energy Commission's Sandia Laboratory, which develops, designs and tests atomic weapons.

Among many other Western Electric defense projects were the 3000-mile Distant Early Warning (DEW) Line in the Arctic and the "White Alice" communication system linking population centers and military installations in Alaska. Both were completed on schedule and turned over to the Air Force.

Another project for the Air Force was the design, production and supervision of installation of a communications system for a guided missile test range extending out to sea.

The backbone of this system is the special underseas cable that stretches 1370 nautical miles from Cape Canaveral in Florida to Puerto Rico. It provides an instant, secret, weather-proof means of transmitting data on missiles in flight.

Radar installations along the way spot the missile's flight position which is flashed continuously to the testing base by cable. So are signals from the missile itself.

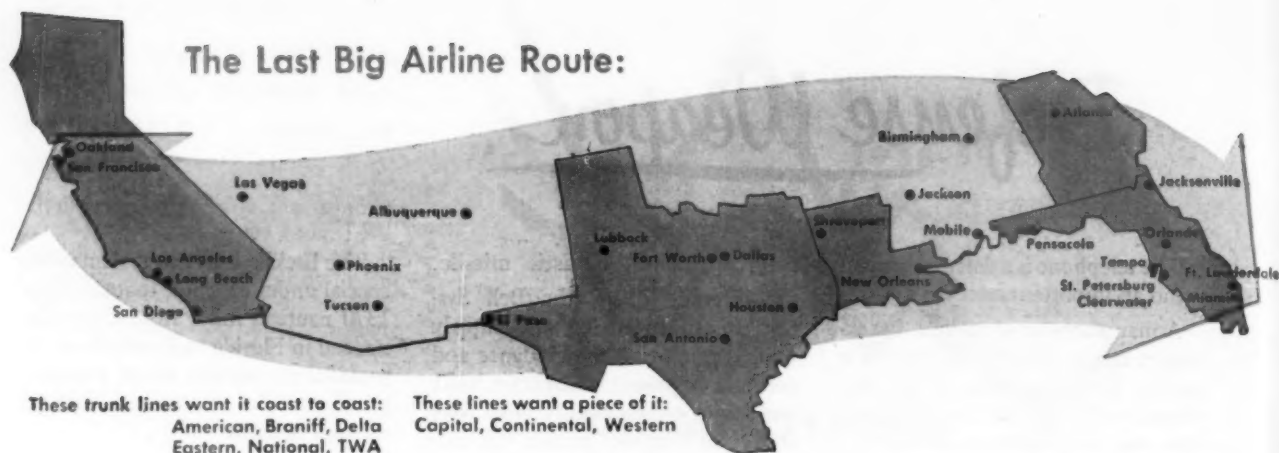
Recently the U. S. Air Force asked us to add the communications phases of a ballistic missile early warning system to the long list of military projects handled by the Bell System.

The Bell System does not solicit these defense projects. But it gives top priority and its utmost effort to the needs of Government whenever it is called upon for work for which it is specially fitted by size and experience.

Particularly when it comes to protecting the country, it's good to have a big fellow around.

**BELL
TELEPHONE
SYSTEM**





Three Rich Markets Go on Block

Nine airlines are competing for CAB awards of a new coast-to-coast route and of access to new regional markets. One prize: a single-carrier Southern transcontinental route.

It's on the Civil Aeronautics Board docket as the Southern Transcontinental Route Case, but nine domestic airlines recognize it as the last big plum in the air transport business. Three major regional markets (shaded areas on map) are up for grabs along with the coast-to-coast route.

The dollar value of the routes varies among the nine airlines according to how much of the area they propose to serve and how much business they already do along the way through interchange agreements with each other. Six airlines bidding for the transcontinental route (map) estimate that the CAB award could add anywhere from \$34.8-million to \$88.6-million to the annual revenue of a single line.

• **Lengthy Hearings**—No one expects CAB's decision for at least a year. First comes a series of hearings by the agency's examiner, Edward T. Stodola. These started last week in Houston with testimony by city officials and business leaders concerning local needs for long haul air service.

The airlines don't get their own turn to testify until July 7 in Washington, after Stodola has made stops at Los Angeles, starting May 20, and Miami Beach, starting June 15. Nevertheless, the lines sent top brass to Houston to start the drum-beating. Eastern Air Lines even sent Chmn. Edward V. Rickenbacker as its envoy.

• **All or Part**—Six of the lines want the transcontinental route plus access to the markets on the route that they don't yet fly into themselves.

The other three are asking only for authority to serve one additional region

in each case: Continental and Western asking only for the route between California and Texas-Louisiana, and Capital wants to tie Texas into its routes in the Great Lakes and Northwest regions. This would be more North-to-South than coast-to-coast.

As routes now stand, TWA has the only service resembling a true transcontinental connection between the Southeast and the West Coast, but it goes by way of St. Louis rather than the southern tier of states.

Other Southern routes connect only one region with another. American, Braniff, Continental, TWA, and Western hold major routes in the West; Delta, National, Eastern, and Capital in the East. It is possible to fly from Miami to San Francisco, for example, without changing planes, but only through interchange agreements among the airlines. As an example, a National crew would fly a plane as far as New Orleans, a Delta crew would take it to Dallas, and an American crew the rest of the way.

With interchanges of this sort, any nonstop service from coast to coast by the Southern route is obviously impossible. That's why CAB is reopening the issue after having approved the interchange expedient 10 years ago.

• **Big Losers**—It has been 30 years since any one airline has been authorized to fly in all three regional markets currently involved. In 1930, American held Los Angeles-to-Atlanta routes, but it lost several links in the chain in 1934.

Routes in the affected territory are not vacant, it must be remembered, so there could be some losers as well as

one or two big winners when CAB makes its decision. Establishment of a through route will automatically divert traffic from the interchanges.

American, for example, estimates it already carries nearly 30% of the traffic generated by cities in the case. If it should lose on all its applications while Eastern should win every point, American estimates it could lose \$42.9-million in revenue next year.

Delta figures it would gain \$81.3-million a year if it should win in full, could lose \$11.1-million if Eastern should win on all points. National could gain \$69.6-million a year if it wins all its points, but faces a \$6.7-million diversion if American takes all.

• **Racing Form**—The best guess of observers in the air transport industry is that no single airline will score a landslide victory. Experts think two or perhaps three carriers will fly the full route or major parts of it.

Because National has been granted no important new route in years, some experts think it has an above-average chance this time. Few believe Eastern will get all it asks, if only because it would make the line by far the biggest carrier in the country; American also is already big, but it has a strong argument in the stake it has in interchanges. TWA is regarded as a lukewarm candidate with its request to serve only five additional cities.

Delta and Braniff are favorite-son regional lines. A Delta official says frankly: This is Delta's big chance—if we don't get this route, we will always be just a regional line." And Braniff phrases its claim this way: "Since Braniff blankets Texas, and the cities in Texas generate 93% of the traffic toward the Southeast and 85% of the traffic toward the West Coast, we would be best able to handle the award."

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*Brown-Lipe-Chapin offers you extensive die casting, electroplating
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In a new diversification program, Brown-Lipe-Chapin offers its die casting and metal stamping services to manufacturers outside the automotive field. Leaders in the field of quality bright work, Brown-Lipe-Chapin now seeks to contribute proven quality and add new sales appeal to your product.

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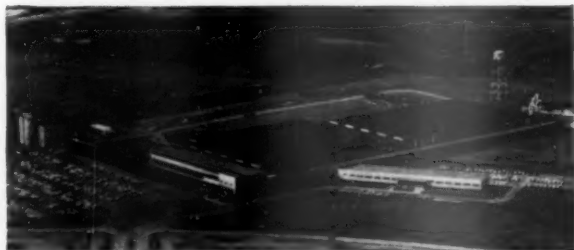
Here are some important Brown-Lipe-Chapin extras:

- Facilities for mass-producing die castings and steel or aluminum stampings, with related processes of anodizing,

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- Quality that's rigidly controlled step by step . . . quality that has been proven by successfully meeting the rigid standards and specifications of the automotive field for years.
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- A guarantee to every new customer to supply their die casting and stamping requirements for as long as they may want to specify.

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This 10-acre plant has complete modern facilities to stamp, die cast, anodize, plate and paint parts to exact specifications.



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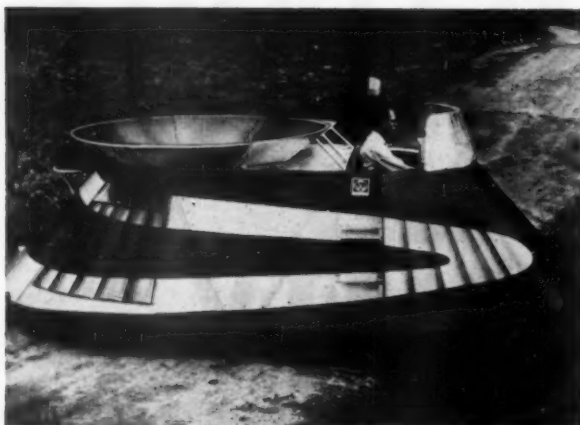


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In Business

• • •



"Car" Tootles Along Crosscountry On Cushion of Air, Just Off the Ground

If you'd like to soar over hill and dale at a dizzy height of from 6 in. to 1 ft., Curtiss-Wright Corp. may have the vehicle for you.

C-W engineers have cooked up the Air Car (picture), which rides around on a low-pressure, low-velocity cushion of air, steering by directional air jets. A piston engine drives the horizontally mounted propeller that provides the air cushion.

The company is still groping for suitable markets for the Air Car. On a mass production basis, says C-W, it would cost no more than an automobile of comparable size. The company says it gives a comfortable ride over fields and streams as well as roads.

Vertol Aircraft Corp. will deliver the first of its Vertol 107 helicopters to the Army by the end of the year, and is looking for commercial buyers. Vertol says the 107 is 50% faster, seats 60% more passengers, and costs 40% less to operate than the helicopters now in commercial use.

• • •

Michigan's Employees to Get Back Pay But Politics Blur Their Later Prospects

Michigan's 27,000 state employees are going to be paid after all—at least for the payday they have already missed. But when they will be paid after that is hidden in the smoke of the fierce political firing between Democratic Gov. G. Mennen Williams and Republican legislators.

The belated payday was achieved after the employees began muttering about court action. Williams accepted the short-term expedient of a law permitting the state to tap earmarked funds to pay the workers.

The governor, facing a \$110-million deficit in the general fund by June 30 and fenced off from earmarked funds, had sought to raise cash temporarily by mort-

gaging a \$50-million veterans' trust fund. But at mid-week this short-term measure was bogged in the legislature, as Republicans sought to exact from the reluctant governor a long-term boost in the state sales tax to 4% from 3%. For the long term, Williams would prefer to impose an income tax.

• • •

General Dynamics, P&R Hope to Create Chemical Complex Out of Coal Waste

General Dynamics Corp. and Philadelphia & Reading Corp. are hatching plans for a \$100-million company that they hope would be the nucleus for a huge chemical complex in eastern Pennsylvania. The jointly owned company would be called Dynamics Reading Chemicals, Inc., and would produce electricity and bulk chemicals from P&R's 350-million-ton accumulation of coal waste (BW—Apr.20'57,p99).

The company would use the Lurgi process for gasifying coal waste. The principal products—ammonia, urea, acetylene, vinyl chloride—are now said to be in oversupply. However, the partners think they could find customers because of their location and the low costs inherent in their "free" raw material.

Final arrangements for the partnership have yet to be settled and no facilities would be built until customers were signed up. Generally, the business world is skeptical of the plan; General Dynamics stock fell 2½ points in the three days after the announcement, P&R fell more than 20.

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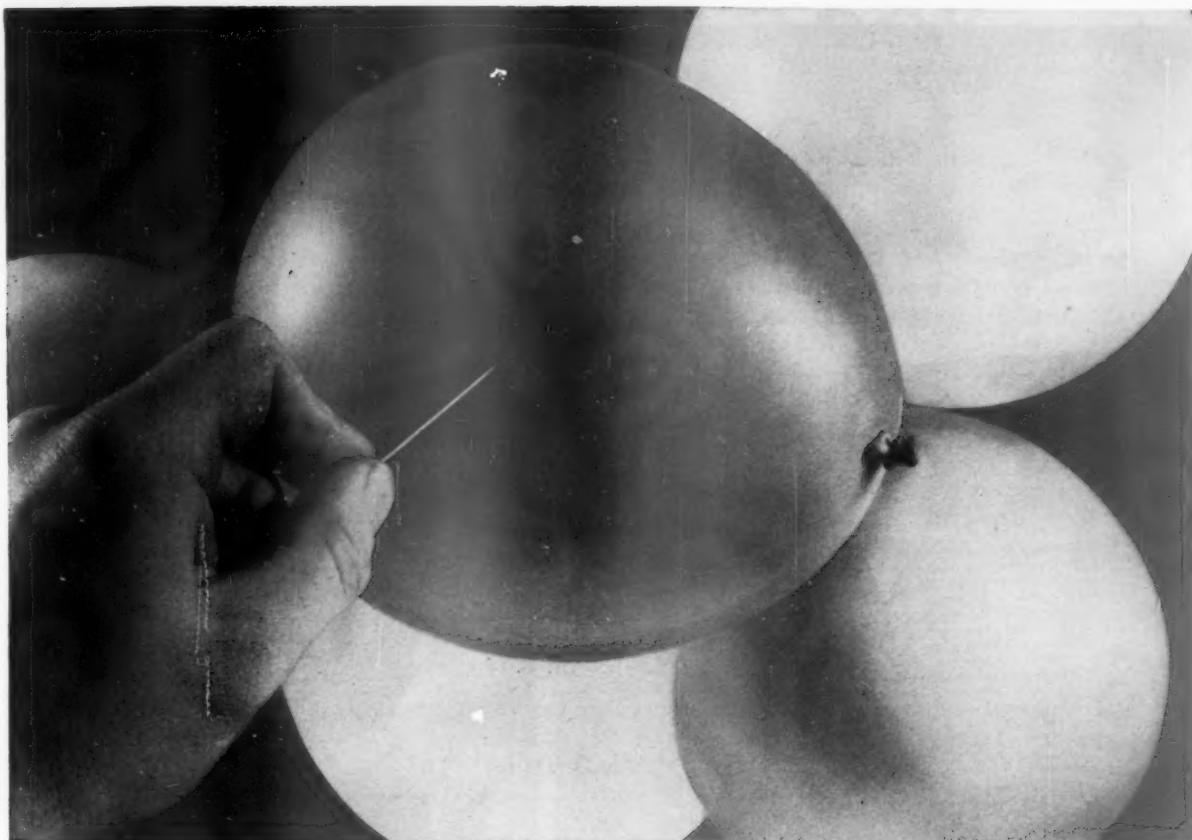
Business Briefs

A U.S. Court of Appeals has reinstated fraud and deceit charges against Baron de Hirsch Meyer and three other Miami Beach bankers in the granting of loans to companies in which they were financially interested (BW—Mar.1'58,p32). A lower court had dismissed the indictments on the grounds that the acts involved had at worst been mistakes in administration.

The Harvard Business School next fall will accept women candidates for the MBA degree if they have completed the one-year Harvard-Radcliffe program in business administration. Qualified women will also be accepted as doctoral candidates.

Federal Judge Thomas F. Murphy has adjourned till May 18 the trial of the Justice Dept.'s suit to force Pan American World Airways and W. R. Grace & Co. to divest themselves of their joint ownership of Pan American-Grace Airways. Both sides requested the adjournment after the government had rested its case, which charges the three companies had conspired to freeze other airlines out of the U.S.-South America business.

ICC this week guaranteed its first loan under the 1958 law designed to aid railroad financing. The loan, for \$934,960, will enable the Georgia & Florida RR to buy 100 new boxcars. ICC is still weighing another, \$1-million request from G&F, along with three from the New Haven and one from the Boston & Maine.



Machine Tool Buyers:

Beware the fallacy of projecting today's labor rates!

Almost without exception, machine tool replacement formulas employ an erroneous factor in computing savings — they are based on *today's* labor rates.

It seems basically sound to suggest, in the case of a contemplated investment in equipment, that a projection be made as to the estimated period over which the equipment is to be used.

Assuming this to be ten years, it is a fairly simple matter to project the *average* wage rate over the next ten years by using the historical increase for the past several years. This increase is known to be from 5 to 6% per year.

Using 5%, we then have a simple computation to determine the average projected wage rate which should be used in computing savings in a replacement formula.

Assuming a current wage rate of \$2.50 per hour, this becomes \$4.07 per hour at the end of ten years, or an increase of 62.8% over today's labor rate.

This percentage increase could reasonably be applied also to other factors in the computation of savings, such as indirect labor, fringe benefits, maintenance, etc.

In contemplating the purchase of a piece of equipment which will last for a number of years, it is fallacious, therefore, to compute savings in terms of today's costs only.

Does Jones & Lamson offer a positive approach; a realistic, workable formula that is free from fallacies such as this? *Yes!*

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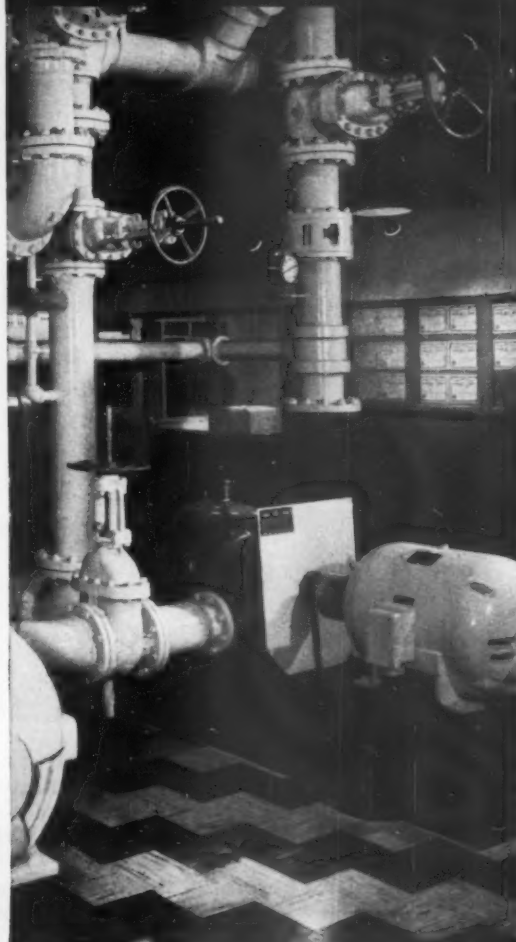
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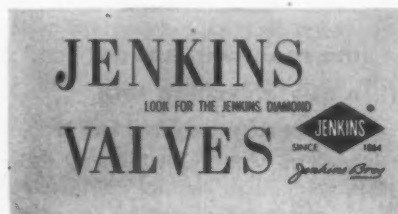
This applied to the valve equipment, and the contractor installed *Jenkins Valves* to control the plumbing and sprinkler systems. Made for a Lifetime of service, and to a known quality standard which has been unvarying for nearly a century, Jenkins Valves provide the fullest protection against costly valve maintenance and replacement.

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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
MAY 16, 1959



Pres. Eisenhower is taking a much tougher attitude toward Congress.

This week's ultimatum to the Democrats marks a turning point in relationships between the White House and the Capitol.

This is but the first installment. As the summer wears on, it's a certainty that the President will involve himself more deeply in Congressional affairs than ever before. What Washington is seeing now is a more vigorous President going on the attack, with high confidence that he will whip the opposition Congress in the showdown.

In housing, he wants \$6-billion in new authorization for FHA to carry on its mortgage insurance program. But the threat of a veto is plain if Democrats tie their big-spending public housing program onto the bill. The Democrats, he figures, will be blamed for any private housing slowdown that may occur if FHA doesn't get its new authorization in a hurry.

On highways, he's putting on pressure for a gasoline tax increase to keep the roadbuilding program on a self-financing basis. Democrats have vowed they won't raise the gasoline tax. The issue here is deficit financing. Eisenhower is just beginning to fight on this point.

Farm reform is also high on the Eisenhower "must" list. But the taxpayers' bill for supporting farm prices will go higher, **despite Presidential pressures for remedial action.**

—•—

Hope is dying for major farm reform legislation in this session of Congress. And there's reason to doubt that Congress next year will write new farm law acceptable to Eisenhower and Benson.

This means the heavy drain on the Treasury will continue. This year the cost will be \$5.4-billion.

Wheat is the No. 1 problem. The 1958 surplus is now passing into government hands. The total under government title will reach 1-billion bu. by July 1 and may go to 1.5-billion bu.

The 1959 harvest will add to the glut. It could cost the taxpayer another \$200-million—and perhaps more—for wheat alone. Here's how:

Present estimates indicate this year a surplus of 125-million bu., based on a wheat yield of 1.2-billion bu. For all purposes, including exports, the nation is expected to need only 1.075-billion bu. The current price guarantee is \$1.81 per bu. When loans on the 1959 crop mature next year, the Commodity Credit Corp. will wind up taking most of the surplus.

Storage charges are tremendous. The cost is more than \$500,000 a day for wheat alone. Unless surplus production is curtailed, the time will come when the cost will climb to \$700,000 a day.

The farm issue has the Democrats stumped.

They have turned down Agriculture Secy. Benson's plans without even giving them serious consideration. Benson wants to lower price supports, reasoning that this would remove the overriding incentive for rampant production of surpluses year after year.

Democrats can't agree on an alternative. There has been much work on a "big farm bill" that would involve direct federal subsidies. But the work is snagged over details. Democrats generally agree now that

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
MAY 16, 1959

legislation will not be ready until next year. Even if it was voted then, a Presidential veto seems certain.

Legislative delay is costly. The first impact of remedial legislation could not affect crops until a full year after its enactment. Wheat growers are assured of at least one more big harvest—that of 1960—under present guarantees. The full effect of any farm law overhaul would not be realized for several years. Price supports would decline gradually.

—●—

A filibuster on civil rights is being advocated by some Southern Democratic senators. They want to try to talk to death any civil rights bill, no matter how mild.

There's doubt that a filibuster will occur, however. Most of the talk appears to be in the nature of a strategic threat, aimed at heading off a tough bill. Timing is for late July.

—●—

Arms makers will continue to have their contracts renegotiated. The House Ways & Means Committee has approved an extension bill, keeping tough the government's rules on recovering "excessive" profits. Last year, refunds of \$112.7-million were ordered by the government.

The extension is for four years, instead of the two that the Administration requested. Main decisions of the committee: to deny defense contractors their sought-for exemption from renegotiation of contracts with incentive clauses, and to reject a guaranteed rate-of-profit provision.

Businessmen got two concessions. The Renegotiation Board is directed to give details on how it calculates excessive profits in each case. Also the bill provides for appeals from tax court decisions.

—●—

Random notes on the Presidential derby:

Wisconsin's primary looks like the big one for Democrats. Scheduled for next Apr. 5, it probably will produce a Kennedy-Humphrey showdown.

Sen. John F. Kennedy, after a first-hand look at the situation in California, has decided not to challenge Gov. Pat Brown in the primary next year. Brown, with the big California delegation in his solid grip, will be a major power in the 1960 convention.

Sen. Hubert H. Humphrey chooses to avoid a head-to-head meeting with Kennedy in the New Hampshire primary next March. The Democratic organization in New Hampshire is almost solidly pro-Kennedy.

Sen. Lyndon B. Johnson got a boost from the Texas state legislature, which has enacted two "Johnson laws." One allows him to run simultaneously on the Texas ballot for reelection and for either President or Vice-President. The second advances 1960 Texas primary election dates to April and May (instead of July and August); so Johnson can fight whatever local political battles are necessary before the Los Angeles convention.

Bets on Nelson Rockefeller for President are increasing. Members of the Commerce Dept's Business Advisory Council, meeting at Hot Springs, Va., talked up his prospects. Vice-Pres. Nixon still gets the nod of the professional party leaders.



Illustration Courtesy of
BEECH-NUT LIFE SAVERS, INC.

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We've changed our corporate name to reflect properly the results of our activities in chemicals and chemical products—which now constitute about one-third of our current business!

Our policy of selective research and product development, which was accelerated by the military packaging demands of World War II, has made 'NATIONAL' one of the leading producers of vinyl acetate polymers and copolymers in emulsion form for packaging adhesives, coatings, textiles, paper-making, woodworking, architectural laminations and paints.

The prominence of the word 'STARCH' in our new corporate name confirms our substantial and continued interest in the future of starches, starch specialties and adhesives—which constitute the major portion of our business!

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Shooting for a better forest

Occasionally, nature produces a pine that grows faster and yields better wood than its neighbors. It has long been the dream of foresters to develop entire forests of these superior trees. Now St. Regis is working toward this end.

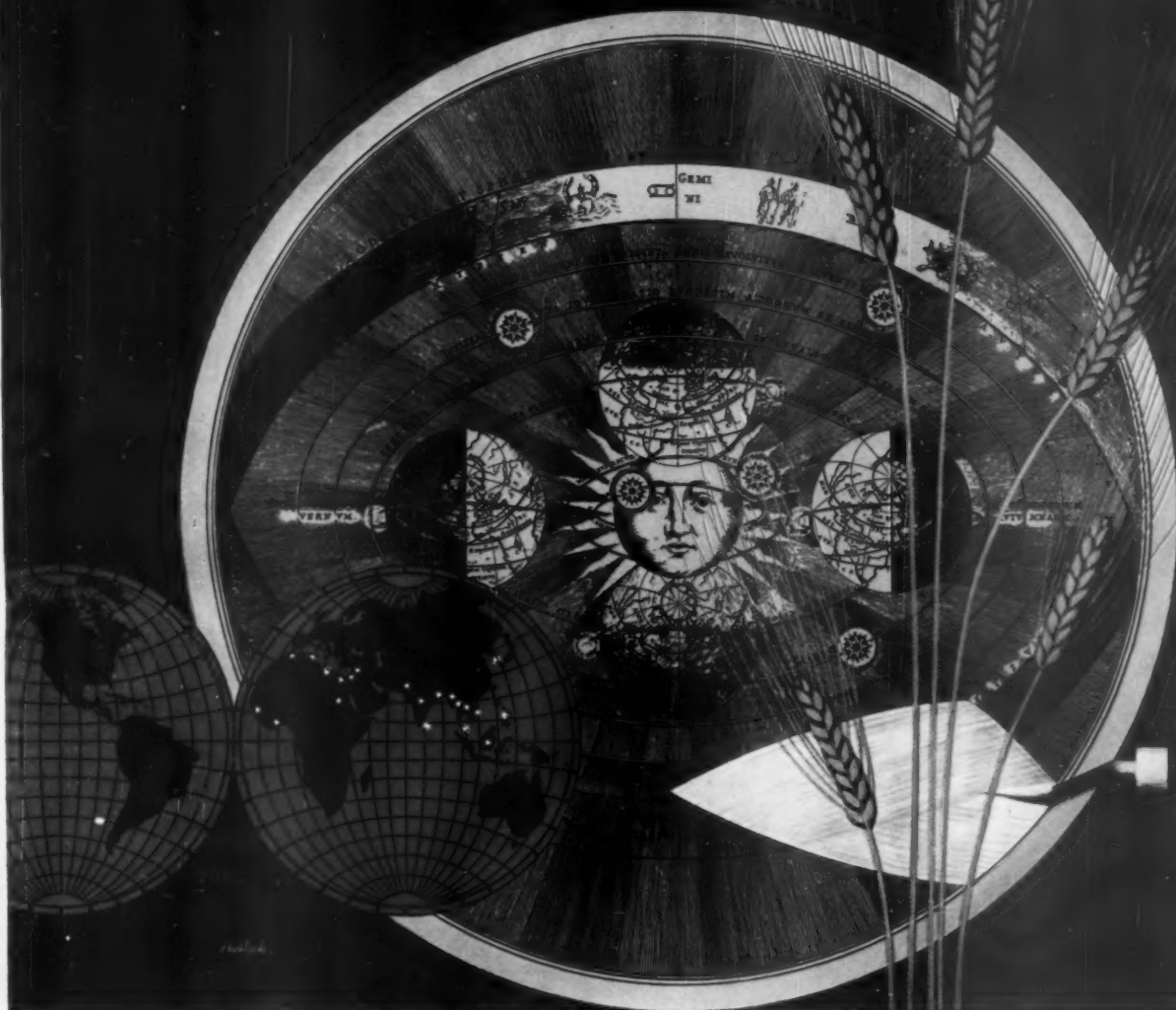
With the University of Florida, St. Regis' foresters search out these superior trees and use high-powered rifles to shoot off branches from which tiny cuttings of new growth are taken. These cuttings are raised, through grafting, in special nurseries. When the grafted pines begin to produce cones, the resultant seed will have the characteristics of the original superior trees. And they will be used to start superior forests throughout the Southeast.

As a major user of America's renewable resource, wood, St. Regis is vitally interested in scientific forest management. For—in addition to helping hundreds of communities everywhere—such farsighted programs help assure the continued growth of the forest resources of the nation and St. Regis. It is another example of how St. Regis research and development is preparing now to fill your future needs in paper, paper products, wood, plywood, plastics, foil and film laminates. St. Regis Paper Company, Dept. B-559, 150 East 42nd Street, New York 17, New York.

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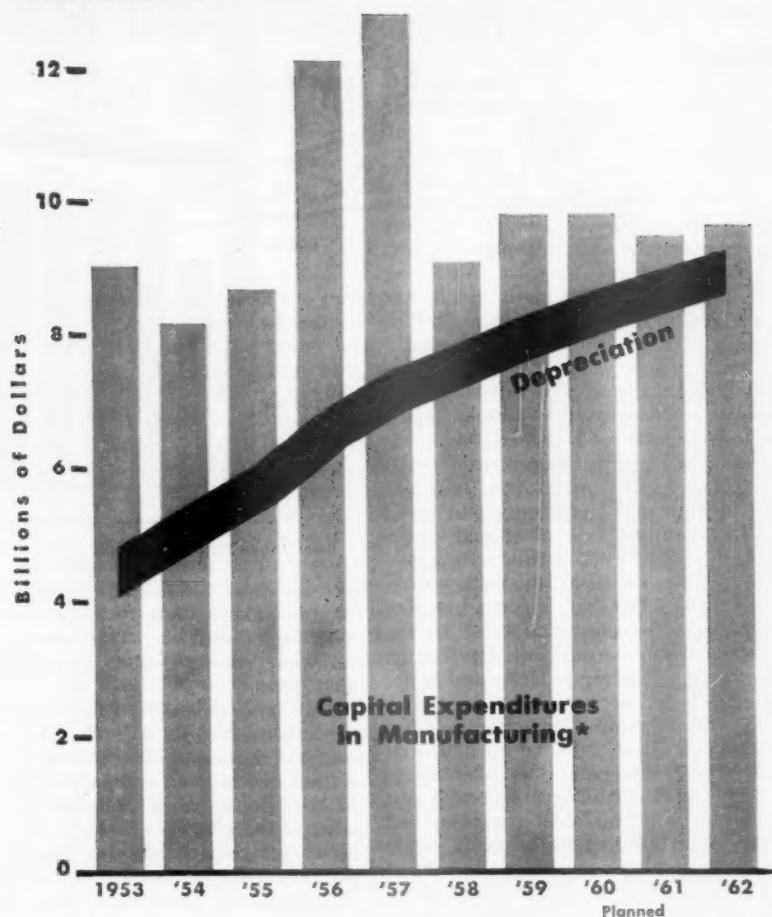
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*except petroleum refining
Data: McGraw-Hill Economics Dept. Depreciation 1953-57 estimated from FTC-SEC quarterly reports

Cash flow from depreciation is rising steadily, covering a bigger proportion of industry's capital spending plans. This can mean a major revision of company financial plans. The big question, of course, is . . .

What to Do With the Cash?

A glance at the chart above will bring glad tidings to many corporate managements. In the next four years, rising depreciation allowances are going to throw off a record amount of cash into company treasuries. Traditionally, many companies earmark most—if not all—of this cash for new plant and equipment. But it's possible that with depreciation allowances rising a good deal faster than industry's present capital spending plans, management will have to figure out what to do with the extra cash.

• **Multiple Choice**—Company officials could, of course, decide to upgrade their expansion plans in view of their increased cash supply. Though a likely choice, it's far from the only one they have. They also could decide to reduce their debts, increase research or advertising outlays, acquire other companies, improve dividends, salaries and wages, or worker benefits. After years of scratching hard and pinching other programs to provide money for expansion, some companies may well find such a de-

cision a rather novel experience. At any rate, management will have a harder time saying "no" to programs frozen out during the recent capital expansion boom.

• **How Much Cash?**—The size of the depreciation melon in the years ahead is indicated by a recent study by the McGraw-Hill Economics Dept. This is what it found:

- For all business, depreciation allowances, which amounted to \$21.5-billion in 1958, will climb to \$25.9-billion in 1962, a 20% rise.

- For manufacturing industries, depreciation is expected to climb from \$7.9-billion in 1958 to \$9.3-billion in 1962, a 15% gain (chart).

When measured against the manufacturing industry's present capital spending plans, the higher depreciation allowances clearly are going to provide companies with a much higher proportion of their outlays for new plant than in recent years.

- **Changing Ratio**—Take the five-year

period 1953-1957: Manufacturing companies spent a total of \$50.8-billion on new plant and equipment, received cash from depreciation amounting to \$31-billion. For this entire period, depreciation covered 61% of manufacturers' capital spending.

Compare that period with the five years from 1958 to 1962, assuming that manufacturing industries' present capital spending plans remain unchanged: Total capital spending in this five-year period would amount to \$47.8-billion, depreciation allowances to \$45.2-billion. Depreciation allowances thus would cover 94% of manufacturing companies' capital spending.

Of course, capital spending plans for 1960-62 definitely are preliminary; except in recession years, these preliminary plans always have been boosted in later budget reviews. Thus, the high ratio of depreciation to spending plans is likely to diminish somewhat.

- **Money to Burn**—Nevertheless, the cash position in the next four years in

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some industries in relation to present capital spending plans is striking:

- In autos, trucks, and parts (chart at right), present plans call for the industry to spend \$2.8-billion on new plant and equipment. But depreciation allowances in the same four-year period will provide \$3.5-billion—an excess of \$650-million.

- In food and beverages, depreciation allowances for 1959-62 will top present capital spending plans by over \$500-million.

- **Smaller Gap**—But, as is usually the case, in most industries there still remains a sizable—though smaller—gap between present capital spending plans and depreciation allowances. In the chemical industry, for example, capital spending will total \$5.9-billion in the next four years, with depreciation covering only \$4.7-billion. And, iron and steel companies are planning to spend \$4.4-billion on new plant and equipment during 1959-62, while setting only \$3.6-billion in depreciation allowances.

It's also a fact that, in general, smaller and growing companies won't be enjoying the heavy ratio of depreciation to capital spending as larger and better established concerns.

- **New Pattern?**—Depreciation allowances, of course, can't be isolated from such factors as profits, levels of operations, new technology, expected cost and sales patterns, debt structure. But American businessmen generally regard depreciation as a primary source of funds for plant and equipment expenditures. Five years ago, for instance, 85% of the manufacturing companies surveyed in a McGraw-Hill study said they allotted all their depreciation allowances for plant and equipment and expected to continue doing so.

But, in the light of the changing ratios between depreciation and capital spending forecast for the next few years, is this picture changing?

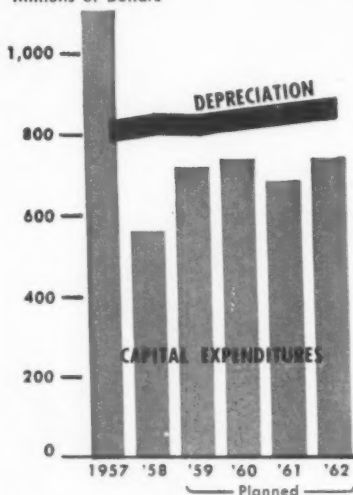
BUSINESS WEEK reporters this week talked to corporate financial executives around the country to try to find out how they would use the extra cash generated by depreciation—and in most cases, increasing profits.

A rather complex picture emerges from the answers they got. But there was one almost unanimous conclusion: The increasing flow of money from depreciation would make present company plans for capital spending look increasingly conservative, and a lot of projects that had been held up during the recession—and the current period of caution—may get the go-ahead before long.

- **Psychological Change**—Many of the company treasurers agreed that there's been an important psychological change among businessmen that already is beginning to be reflected in increased capital spending. Says one Cleveland financial man: "Most businessmen have

Autos, Trucks & Parts

Millions of Dollars



Data: McGraw-Hill Economics Dept.

become more optimistic in just the last month. They're more willing to consider capital outlays." This man found business "getting excited about expansion again."

But other officials weren't catching the expansion fever so easily. Indeed, one said the inflow of cash from depreciation had been so sudden that "most of the people haven't yet figured out what to do with it." Some companies aren't yet certain that the rising flow will continue; so, instead of enlarging their spending plans right away, they are sitting on their cash and watching business.

- **Wait-and-See Attitude**—In Detroit, several executives said that the new rise in cash had come so fast that they had not yet even put it into government bonds. That, they said, is where it will go temporarily until the future is clearer, but now much of it is in the bank.

There are several reasons why the increased cash flow from depreciation and profits will have a delayed impact on capital spending. For one thing, many companies are holding back until they feel more certain the rise represents "permanent income." For another, those companies still stuck with excess capacity acquired during the last spending boom will wait until the last minute before expanding to meet rising sales.

Many treasurers feel that there will be a strong rise in capital outlays, but they say spending won't run hog-wild as it did in 1955-57. In that period, says Walter Hoadley, Jr., vice-president and treasurer of Armstrong Cork Co., "many sales managers fought and bled for more capacity."

- **Better Facilities**—Hoadley feels that, once business is convinced that the cycle has made a decisive upward turn, more companies will say, "Let's go ahead." He thinks that this swing in sentiment

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already has occurred. Initially, he says, capital outlays will be made for new products and processes—spending that will cut costs or perk up sales, rather than spending primarily for plant expansion. Hoadley also emphasized his belief that a lot of the expansion money will go into new facilities U.S. companies will build abroad.

An official of a Midwest manufacturing concern confirms Hoadley's thinking. He reports his company has asked all managers with capital proposals—even those turned down in the past—to bring them up to date and submit them. The managers also were told to emphasize outlays that would reduce costs and increase return on investment.

• **"Trickle Down" Theory**—A leading management consultant, who talks to executives in many industries, feels that some of the extra cash in management's pockets will eventually trickle down through the whole corporate structure. "When the cash flows in," he says, "you inevitably get a lifting of horizons." It simply becomes harder for the money watchdogs to say "no" to a whole range of programs competing for funds. In addition to capital projects aimed at cutting costs or increasing sales, this takes in "health, education, and welfare" expenditures, research outlays, advertising programs, dividend payments, executive salaries, and wages and fringe benefits.

With extra cash on hand, some companies also start hunting harder for other companies to buy or merge with. A few—though BUSINESS WEEK reporters didn't encounter many—decide to try to reduce their corporation's outstanding debt. And many companies take an even tougher look at their existing plant and equipment, revise upward their calculations of what equipment is obsolete and ought quickly to be replaced.

• **Genuine Optimism**—Despite the diversity of views on what to do with the cash, it's hard to find anyone who seriously doubts the optimistic implications of the increasing flow of funds to business. "There are so many things you can do," says Lawrence Wilkinson, Continental Can's executive vice-president for finance and administration. "In our case, we'll build up our working capital position, reduce our seasonal borrowings." But Wilkinson also stresses that the increased cash flow will "make it possible for us to consider a wider range of expansion projects—and try more quickly to put ourselves in a strong position geographically."

In a broader view, Wilkinson finds businessmen he knows raising their sights, planning further ahead. "It begins to look," says he, "as though we'll really get into those fabulous '60s sooner than we thought—and without a major recession." **END**

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... New houses (Union Carbide), organs, refrigerators, cameras—for naming a steer...



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DU PONT 100,000 LUCKY "7" CONTEST
OVER 1700 PRIZES - EASY TO WIN
FUN TO PLAY!
7 SECOND PRIZES OF A BUICK
77 THIRD PRIZES OF A PORTABLE TV
777 FOURTH PRIZES OF A TRANSISTOR RADIO
HERE'S ALL YOU DO TO ENTER!
Simply count the number of "7"s in the telephone directory for your area. See also rule for complete rules.
SEE BACK FOR BIG BONUS PRIZES AND OFFICIAL ENTRY BLANK

Cars, cars, cars (including midgets) from General Mills... only name and address needed



WIN A FREE 1959 PONTIAC
32 New Pontiacs!
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1,000 scale model Pontiac Kits!
8,882 prizes in General Mills \$250,000 BIG 8 SWEEPSTAKES
No prizes to waste! No Pontiac to lose!
General Mills

Contests Favored As Sales Boosters

This week, the usually conservative du Pont company tries its hand at a 90-day million-dollar national consumer merchandising contest not unlike the grandiose schemes that soap companies seem so fond of.

The big chemical company is undertaking this hard-pitch kind of merchandising for the first time to stimulate sales of its No. 7 line of automotive polishes and waxes. This is a group of some 30 "car-care" items, one of the oldest and best selling of its kind.

Thus, du Pont becomes the latest entry among big corporations in the booming consumer contest business. The ads above are just a sampling of

current campaigns which, by the end of the year, will have cost an estimated \$60-million for cash and merchandise and promotional budgets to entice a public that's eager to get something for nothing.

• **Lure of Prizes**—You can find a number of reasons for the popularity of contests right now:

• **Television quizzes**—though dead now from overexposure and scandals—proved that people are excited by the lure of really important prize money or merchandise. Advertisers are using the contests to capitalize on that.

• **With the recession** over and people obviously in the mood to buy,

this is the time to hit the consumer with big special retail promotions.

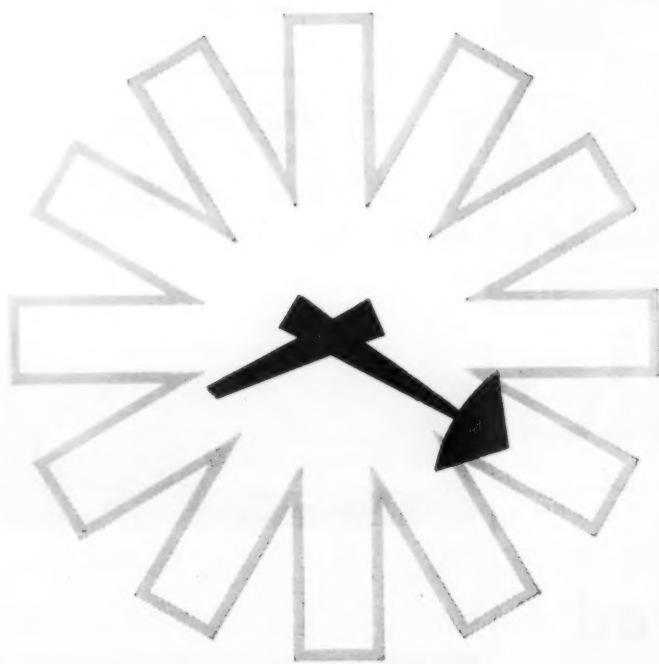
• **Besides that**, contests give the brand manufacturers distributor-dealer participation, with point-of-sale impact that seems to be the key to successful competition today (BW—Apr. 26 '58, p66).

• **Contests, too**, are relatively inexpensive if for no other reason than a manufacturer could hardly put a price on the retail display he gets from a well-planned campaign.

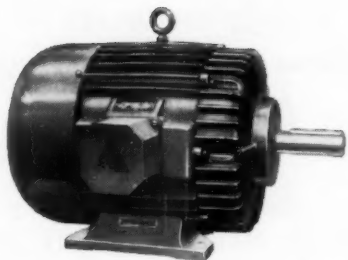
• **Successes**—Those in the business of promoting the ideas of contests find companies more and more receptive.

Reuben H. Donnelley Corp., big di-

Delco delivery



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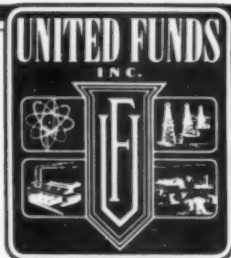
Delco Delivery Time

How does this fit in with your production schedule! Delco Products offers from in-stock to three weeks delivery on integral h.p. polyphase motors. This includes rerated 182 through 445U frame sizes. In many cases overnight delivery is available! A modern assembly system, geared to your needs, makes this type of quick delivery possible. Now you can be sure of faster delivery, plus the quality and performance for which Delco Motors are famous. Always call Delco Products for the best possible motor in the least possible time.



DELCO MOTORS

*Delco Products, Division of General Motors, Dayton, Ohio
Branch Offices in Principal Cities*



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MUTUAL FUND SHARES

UNITED ACCUMULATIVE FUND

A Mutual Fund investing in a diversified list of more than 100 common stocks selected for possible appreciation and income.

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A Mutual Fund investing for growth possibilities in securities of companies which search for and produce basic raw materials from natural resources.

UNITED INCOME FUND

A Mutual Fund seeking current income through investments in more than 100 American corporations.

UNITED SCIENCE FUND

A Mutual Fund investing for long-term growth possibilities in securities of companies, whose growth is based substantially upon scientific research.

Waddell & Reed, Inc.

Principal Underwriters

For Prospectus and descriptive literature, without obligation, fill in and return this advertisement.

Waddell & Reed, Inc.

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- ☐ United Accumulative Fund
- ☐ United Continental Fund
- ☐ United Income Fund
- ☐ United Science Fund

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Address.....

"OFFICES COAST TO COAST"

"... up to then the company had felt contests below the dignity of its corporate image..."

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rect mail and telephone directory advertising specialist that also handles contests, says growth of contests has been especially marked in the past couple of years. According to M. J. Pilert, account executive for the du Pont contest, 1959 is continuing the growth trend. Donnelley claims 75% of the contest-judging business, with Advertising Distributors of America in second place.

The boom put Stanley Arnold, former sales promotion chief at Young & Rubicam, into business for himself as Stanley Arnold & Associates. Since Arnold left Y&R last year, he has signed up a list of top clients, including Lever Bros., Jersey Standard, IBM, Reynolds Metals, American Tobacco, General Foods, Carnation, and Stouffer Corp.—and now du Pont.

An ex-supermarket merchandiser in Cleveland, where he displayed his flair for special promotional gimmicks (snowballs in July, live penguins for a frozen food special), Arnold now bills himself as an "authority on contests."

He gets at least a good part of the credit, while at Y&R, for dreaming up the Piel's beer Treasure Island contest (first prize: a deed to a small island in the Bahamas); Remington Rand's Share of America contest, which provided a portfolio of one share of every company listed on the New York Stock Exchange; and Borden's Name the Twins (of Elsie the Cow), which drew an unprecedented 2.9-million entries.

• **Changed Attitude**—It was Arnold who walked in cold on du Pont brass in Wilmington, Del., and sold them on the idea of a national contest, something that up to then the company had felt below the dignity of its corporate image.

J. B. Dietz, director of sales of du Pont's fabrics and finishes department, of which the No. 7 line is a part, had to go all the way to the executive committee to get approval. This indicates how far the contest departs from previous du Pont policy. Management still wants to keep the show as dignified as possible—no razzle-dazzle.

Du Pont wants the campaign to boost sales in a highly competitive market "loaded with people selling snake oil." A more subtle aim probably is du Pont's sensitivity to bigness, which government antitrusters have been plugging. The campaign emphasizes du Pont the merchandiser of consumer goods—not du Pont the big chemical

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Let us make an individual Plant Location Study for you . . . in confidence and without obligation. It will show you clearly and concisely the competitive advantages Baltimore offers your particular business. Write, wire or phone our Industrial Development Service, 1103 Lexington Building, Baltimore 3, Md.

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**"... 'properly planned,' says
Arnold, 'contests will sell
caskets' . . ."**

STORY starts on p. 53

nique. Arnold is critical of some contests for a number of reasons.

Ease of entry, he says, is important for mass consumption products. And it's important, too, that people know they can win, that there is no band of professional contestants grabbing all the prizes.

Then there is timing. Du Pont's campaign comes at the peak of the auto-driving season. Arnold insists companies avoid using contests—"no answer to a sales manager who isn't doing his job"—on off seasons: "I'd rather get a 10% increase on a \$1-million in sales than 10% on \$100,000."

How you promote the contest depends on the kind it is. Arnold says you pick media depending on where the product is bought, who buys it, its price range.

Prize structures are sometimes ridiculous, says Arnold. "Contests appealing to older people will give a trip to Alaska, or there will be Cadillacs for kids."

• **Share of America**—He prides himself on Remington's Share of America contest. The merchandise to be pushed—electric shavers—was fairly high-priced (in a discount house market), with a more sophisticated batch of customers than supermarkets get. So the contest was a 25-words-or-less essay on what America means ("Gen. McArthur as board chairman made this a natural," says Arnold, "especially in view of the cold war"). And, in a recession, the confidence shown by giving stock as a prize was an attention-getter.

"That's all contests are for," says Arnold, "to get attention."

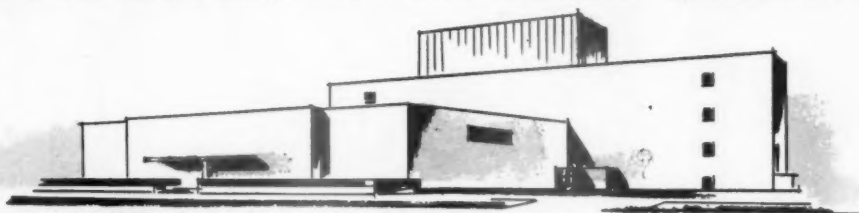
• **Du Pont No. 7**—In the case of du Pont, the selection of the contest—a blending of the ideas of du Pont, the Batten, Barton, Durstine & Osborn ad agency, and Reuben H. Donnelley Corp.—was picked to be simple. Du Pont, says Arnold, was "not looking for college graduates" as entrants.

It also had the advantage of carrying the product image—No. 7—in the promotional advertising. That's a trick that good contests use where possible. For instance, a Simmons mattress contest prize was a mattress (Simmons, of course) stuffed with money.

Do contests pay off? Arnold has no doubt about it. He thinks, for example, that du Pont will get at least 150,000 outlets participating in the campaign. With that kind of coverage, sales increases are practically assured.

"Properly planned," he says, "contests will sell caskets." **END**

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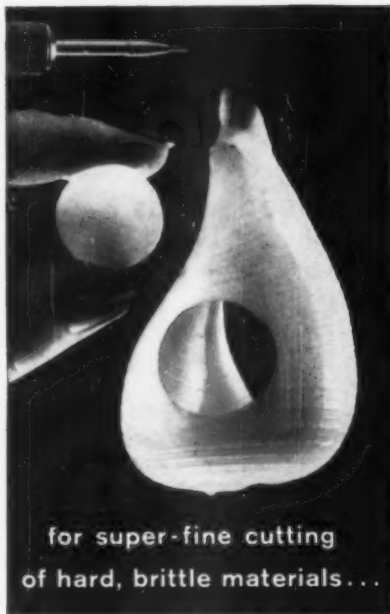
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for super-fine cutting
of hard, brittle materials...

the *S.S. White*

Industrial Airbrasive Unit

We cut a section from this fragile sea shell just to show that in a matter of seconds almost any hard, brittle material can be cut or abraded with the S.S. White Industrial Airbrasive Unit.

Cool, shockless, super-precise, the unit uses a controlled stream of fine abrasive, gas-propelled through a small nozzle. It is so flexible in operation that the same simple tool can frost a large area or can make a cut as fine as .008" ...on a production basis!

Almost every day new uses are being discovered for the Airbrasive Unit, in the lab or on the production line... shaping... deburring... wire-stripping... drilling... engraving... frosting... materials testing... cleaning off surface coatings.

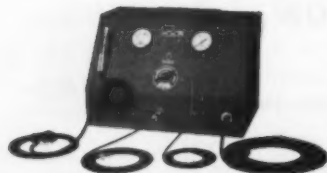
All types of hard brittle materials... glass, germanium and other fragile crystals, ceramics, minerals, oxides, metal, certain plastics.

Send us samples and requirements and we will test them for you at no cost. For further information write for bulletin 5705A.

WRITE or CALL COLLECT

1065

S.S. White



S.S. White Industrial Division
Dept. 15A, 10 East 40th Street, New York 16, N.Y.
Western Off.: 1839 W. Pico Blvd., Los Angeles 6, Cal.



For Picnicking in a Breeze

Paper plates with an adhesive tab on the bottom—to make them proof against winds across the outdoor table—are Superior's bid to win brand identification in its market.

Last summer the sales vice-president of Superior Paper Products Co., Marc Van Buskirk, went to a picnic on a windy day. The July breezes blew paper plates off the picnic table almost as fast as they were taken out of the package.

Naturally enough, Van Buskirk was vexed, but since Superior—a Marion, Ind., subsidiary of Cornell Paperboard Products Co., Chicago—is one of 19 U.S. producers of paper plates, he was in a position to do something about it. He approached Minnesota Mining & Mfg. Co., and together the two companies developed the new Sta-Put plate (picture), designed not to tip over, blow away, or slide.

The secret of Sta-Put plates is a tiny tab of double-coated adhesive tape on the bottom. The customer removes the outside liner used to prevent plates from sticking together in the package and anchors the plate to the table with a little pressure. Even a 30-mph. wind won't budge it then, and the adhesive doesn't leave a mark on wood or cloth. But it can be removed easily with a sideways twist.

• **TV Demonstration**—With the picnic season just ahead, Superior and 3M are launching a nationwide television campaign to promote Sta-Put plates by demonstrating their special features. It will be the first TV push by a maker of paper plates.

Up to now, the manufacturers—among whom Superior ranks fourth or fifth in volume—have been unable to establish a brand image for their products because all paper plates were ap-

proximately similar in quality and price. Superior hopes to remedy this with the Sta-Put. "Our advertising budget," says Van Buskirk, "is far in excess of what the entire industry spent last year, which probably didn't exceed \$10,000." Although 3M is footing most of the bill for the TV effort, Superior plans to spend around \$25,000 for advertising and promotion on its own this year.

The results of Superior salesmanship are already beginning to show up. A storekeeper in Washington, D. C., told a Superior representative: "You're the first paper plate salesman who has given us a reason to stock another brand." Libby, McNeill & Libby have ordered 150,000 Sta-Put plates for its summer food promotion.

• **Better Than Coating**—Van Buskirk sees Sta-Put as the most exciting development in its field since the advent of plastic-coated paper plates eight years ago. He thinks the customer will be happy to pay an extra penny or two per 160 plates for Sta-Put. Since Superior started marketing the new plates in strategic areas early this year, the company has been running four shifts at its plant to produce 1-million Sta-Put plates daily, in addition to its ordinary variety. At least \$100,000 has been spent for special machinery. "Eventually, we'll have to build a new plant," says Van Buskirk.

With the boom in outdoor living, paper plate sales soared from an estimated \$10-million in 1950 to \$36-million last year. Superior's 1958 volume was in the \$1-million to \$2-million range. **END**



Underwriter's Safety Award
—1,160,000 consecutive
accident-free miles

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- Over 99% claim-free shipments

68 terminals in 26 states serving
8,039 points—many of them small towns
Coast-to-coast service



**Over 3,000 people
make shipping as perfect
as possible.**



**INTERSTATE
MOTOR FREIGHT
SYSTEM**

Grand Rapids, Michigan

MORE THAN A TRUCK LINE...A TRANSPORTATION SYSTEM

In Marketing

Mother's Day Outstrips Easter As Department Store Sales Season

Federal Reserve Board figures just released confirm the continuation of a surprising retail trend—Mother's Day has outdistanced Easter as the No. 2 selling season for department stores. FRB data show that in 1951, sales in the two weeks preceding Mother's Day started outstripping sales in the two weeks preceding Easter, and they have maintained the lead in every year since.

Dallas Federal Reserve official Zenas B. Smith says, "I doubt that most merchants are aware of the peg that Mother's Day provides in this sales boost." Many merchants interviewed by BUSINESS WEEK reporters bear out his statement. Several store officials were surprised to learn that Mother's Day sales had shot past Easter.

Women's accessories—cosmetic cases, handbags, and jewelry, items suitable for Mother's Day gifts—were reported to be the big sales leaders throughout the country. But sportswear and summer clothing racked up impressive totals, too. Noting this strength in summer merchandise, the president of one of New York's largest department stores commented: "We have been impressed by the way Mother's Day has outdistanced Easter. But I doubt that you can explain the shift primarily on the basis of sentiment. Gift-giving certainly provides a healthy boost to sales. But we have experienced an even stronger pickup in storewide sales of summer merchandise. I think you can attribute Mother's Day's solid showing to its falling in early May—right at the peak of seasonal buying of summer goods. And the growing popularity of outdoor living has made this an increasingly important sales season."

"Serious" TV Shows at Prime Hours Gaining Favor With Nets, Sponsors

A couple of events last week suggest that both networks and sponsors are thinking about the "serious" TV audience.

Bell & Howell last Friday evening offered on NBC-TV an hour's documentary, *Why Berlin?* It featured films of events leading up to the Berlin crisis, with a live commentary by Chet Huntley, NBC-TV news analyst. A sponsored show of this kind in prime evening time is unusual. Peter G. Peterson, executive vice-president of Bell & Howell, explained: "It is our belief that programs of this caliber, presented on prime, weeknight time, will prove popular enough to be commercially feasible."

Last week, too, CBS's Frank Stanton said that CBS Television Network will expand its "informational programming" on a monthly basis in prime evening time next fall. CBS has had a number of such hour-long programs this year—one on China, for example, and one on the Geneva conference. But these have run on a sporadic basis.

The Bell & Howell show turned in a pretty good

Trendex rating. It had an 8.3 rating on a 19.7% share of the listening market, against a 13.7 rating for a 30.8% share for CBS's *Rawhide* and *Amateur Hour*, and a 16.4 rating for 38.3% share for ABC's *Walt Disney Show*.

New York Stores Survey Their Losses As 24-Day Delivery Strike Ends

New York City retailers began picking up the pieces this week as a 24-day strike of United Parcel Service employees ended. The strike shut off the delivery service's normal flow of 800,000 packages a week from its customer stores in the city and suburbs.

The president of a major store painted this typical picture of the strike's effect: "Sales of furniture and heavy merchandise came to a standstill. We eliminated advertising on these items, even for future delivery. A high percentage of mail, phone, and particularly COD business was killed, even on softgoods. Walk-in trade held up well on apparel and general merchandise. And the branches weren't affected except for merchandise too bulky to fit into the customers' cars."

Look's "Magazone" Plan Offers Ad Space in Any of Seven Regions

Look magazine has gone competing magazines one better in providing regional coverage to advertisers who want to reach selected markets through a national magazine.

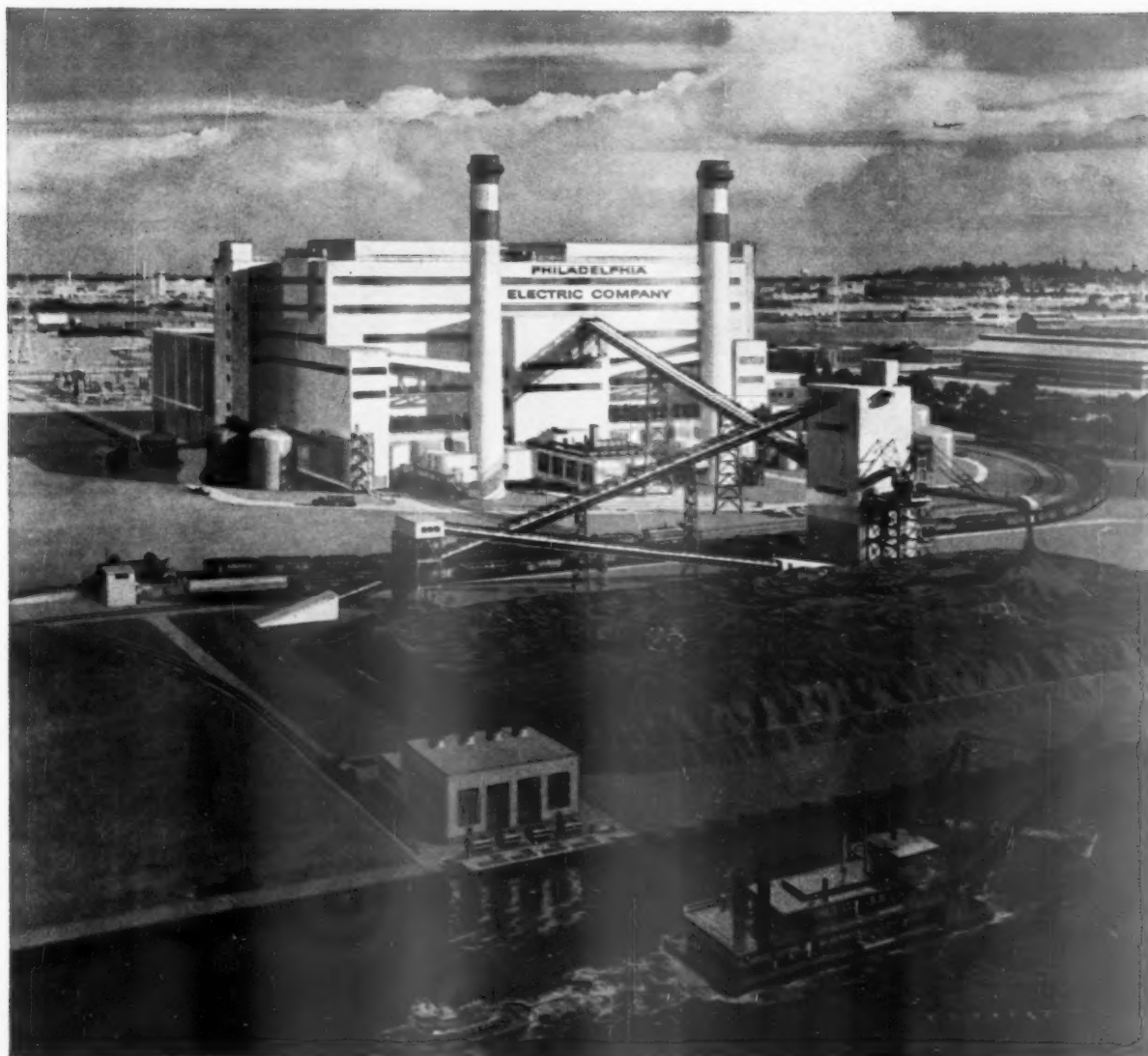
Under its "Magazone" plan, announced last week, Look has sliced the U.S. into seven regions. Advertisers may run insertions in one or more of these regions—with the option of running different ads in different regions.

Magazone is another gambit by big national magazines to woo advertisers whose regional distribution makes nationwide advertising wasteful—or who want to pinpoint messages to different markets. Better Homes & Gardens and Reader's Digest, for example, accept advertising in separate Western editions. Sports Illustrated started with an Eastern edition in 1954, now has four regional editions. However, these are not all available with the same frequency. Its Eastern edition runs every week, but the Southern edition only once a month (other weeks, the South gets the national edition).

Look's plan has an edge over the split run offered by a number of other magazines. This allows two advertisers to divide up a national run—but there must be two to split the run.

Look figures its plan will make it more competitive with TV and with newspaper supplements, which often offer advertisers regional coverage. Says a Look executive, "We think they're stealing some of the money right now."

The plan will be available with the Sept. 15 issue. Initially it will be offered only on an every-other issue basis. Cost per thousand on a black and white page comes to \$6.11 for the first 400,000 of circulation, \$4.45 for each additional thousand. This compares with a cost per thousand of \$4.14 for a full-run national ad in Look.



Artist's conception of new Eddystone electric generating station, which will soon be in operation near Philadelphia.

***Philadelphia Electric's progress
parallels
Greater Philadelphia's growth***



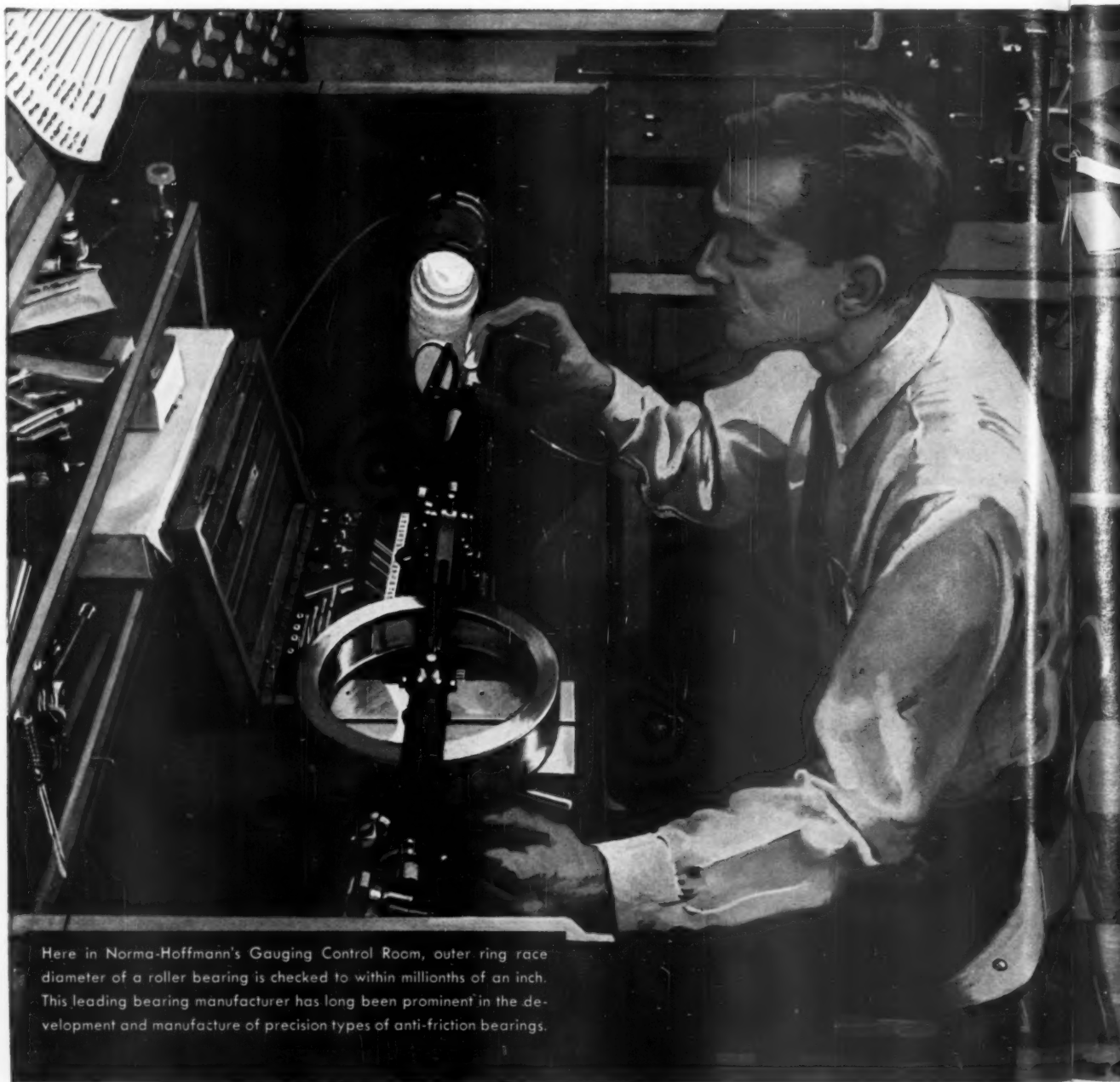
PHILADELPHIA ELECTRIC COMPANY

A business-managed, tax-paying utility company owned by more than 100,000 stockholders . . . Serving the world's greatest industrial area. Delaware Valley

Philadelphia Electric's progress goes hand in hand with the dynamic growth of Greater Philadelphia. In the past decade alone the Company has spent \$675 million for new equipment and facilities. It continues to invest millions of dollars every year in the future of the area. Behind this great expansion program is Greater Philadelphia's rapid industrial growth—a growth created by such factors as fine transportation facilities, vast nearby markets, easy access to raw materials, skilled labor, and low-priced electric power for every possible need. Why not give your next plant more power to grow in this Land of Opportunity?

Correct Lubrication in Action...

Bearing manufacturer



Here in Norma-Hoffmann's Gauging Control Room, outer ring race diameter of a roller bearing is checked to within millionths of an inch. This leading bearing manufacturer has long been prominent in the development and manufacture of precision types of anti-friction bearings.



Complete Engineering Program
Proved Petroleum Products

Mobil

rolls up \$23,530 saving!



"In a growth company, we cannot afford to delay tomorrow's decisions while we stamp out today's brush fires. What plagues those of us in management are the myriad, small unknown-to-us problems that soar production costs, affect competitive position. This is where Mobil is helping us reduce manufacturing expense and improve production. Our 1958 records show that we saved over three times as much as we spent with Mobil last year . . . a most profitable relationship!"

R. O. Robertson

Vice-President—Manufacturing
Norma-Hoffmann Bearings Corporation, Stamford, Conn.

Mr. Robertson's words underscore the importance of Correct Lubrication to any profit-minded manufacturer. At Norma-Hoffmann Bearings Corporation Mobil lubrication engineers work closely with an extremely cost-conscious maintenance department. Downtime, parts replacements and maintenance costs have been cut—\$23,530 saved in 1958 alone. Some of these savings are detailed below.

For example: Sticking valves on one grinder were a constant problem. Cause of the trouble was a mystery. Mobil's representative sent a sample of lubri-

cant from the machine's reservoir to the Mobil laboratory. Analysis report led to cause of trouble—a lead sheathed cable submerged in the oil reservoir was contaminating oil. This detective work on the part of Mobil restored continuous production, saved \$5,850 in maintenance costs.

This kind of practical engineering help is just a part of a Mobil program of Correct Lubrication. For complete details on how Mobil can improve your profits call your nearest Mobil representative. You'll find—You're Miles Ahead with Mobil!



Erratic, stick-slip operation of three grinders caused poor size holding. Mobil engineers found trouble was caused by deposits on valves and use of incorrect competitive oil. A correct way and hydraulic oil was installed. Greater production, fewer wheel dressings, less scrap and reduction in valve-cleaning costs saved \$8,640.



To keep 16 of Norma's Multiple Spindle Bar machines functioning properly required a weekly 40-minute production interruption on each one to supply lubricant for tool slides. Mobil engineer studied procedure . . . suggested a simple lubrication system modification. Application time was reduced 75% . . . \$7,040 saved on production and application.

Correct Lubrication

Another reason You're Miles Ahead with Mobil!



PRIVACY

GF partitions don't divide space...

they multiply productivity

Irving Gilman, Vice President and Project Director of the Institute for Motivational Research, says: "When privacy is employed to eliminate work-robbing distractions, productivity shows marked improvement. This is especially true with workers whose jobs require intense concentration or those who receive business visitors. Privacy boosts morale, too—satisfies the employee's desire to work in quarters he regards as his own."

You can create privacy for your workers—overnight—with GF partitions; and as space requirements change, you can rearrange your GF partitions,

quickly and easily. To boost productivity in your offices as much as 25%, call on GF—America's largest maker of metal business furniture. Only GF offers complete planning, design and decorator services that take into consideration, not just space utilization and work-flow, but the many human factors that make for efficiency.

An informative booklet, "PLAN TO PROFIT FROM YOUR OFFICE INVESTMENT", is yours for the asking. Just call your GF branch or dealer, or write The General Fireproofing Company, Department B-27, Youngstown 1, Ohio.

GF

GENERAL FIREPROOFING

METAL BUSINESS FURNITURE

In Business Abroad

• • •

Latin American Communists Claim Big Gains, With More to Come

Latin America's Communists evidently see 1959 as a year for big gains. Encouraged by recent successes, particularly in Cuba, Venezuela, and Argentina, the Reds are in a cocky mood. Here's what they're up to:

Party membership—say the Communists—is on the upswing. They claim 360,000 members in the 20 Latin American countries. (In early 1958, the U.S. State Dept. reported membership at only 200,000.)

In Uruguay—traditional base for Red operations in South America—some 60 diplomatic pouches move weekly between Montevideo and Moscow. A special Soviet emissary shuttles between the two capitals almost weekly—and gets a five-man “diplomatic” guard on his trip from Montevideo's Carrasco airport to the local Soviet embassy. Russia is pressuring Uruguay to permit Aeroflot, the Soviet airline, to land at Carrasco.

In chaotic Cuba, the only two organized parties are Fidel Castro's 26th of July Movement and the Communists. The Red-lining newspaper *Hoy* (circulation: 6,000) is backing Castro at every step. David Salvador, Cuba's top union leader, is not considered a fellow traveler; but the Communists are gunning for increased power in union elections on June 7.

Even if the Communists exaggerate their successes, the U.S. is not taking the situation lightly. In El Salvador a month ago and in Chile last week, U.S. ambassadors to Latin America met to discuss Castro's growing influence and rising Communist activity—as well as Latin economic problems.

• • •

Moscow Turns to the West Again For Help on Seven-Year Plan

Eager to plug gaps in its ambitious Seven-Year Plan, Moscow—for the moment—is altering its postwar policy of do-it-yourself industrialization and turning to the West for sizable economic and technical assistance.

In recent months, Russia has placed over \$100-million worth of orders with British industry that include a rubber-tire plant and a synthetic-fiber plant (BW—May 9'59, p110). Moscow also has signed contracts with West German companies, particularly for much-needed help in developing its chemical industry.

This week, on the heels of Prime Minister Macmillan's trip to Russia, a British trade mission arrived in Moscow to negotiate an Anglo-Soviet trade agreement. The mission, headed by Sir David Eccles, president of the Board of Trade, is optimistic. The Russians clearly want complete Western-built plants (as they did in the 1930s). Vickers-Armstrong (Engineers), Ltd., already has two new contracts in the works, besides the \$6.3-million chemical plant ordered two months ago. Just this week, the Russians bought \$2.8-million worth of British refrigeration equipment.

MORE NEWS ABOUT BUSINESS ABROAD ON:

- P. 68—De Gaulle government is winning anti-inflation battle through austerity program blueprinted by economist Jacques Rueff.

There may be one stumbling block. Moscow is switching from cash deals to requests for medium-term credits on purchases. If Britain were too generous with credit to Moscow, its Commonwealth and NATO allies—also hungry for credits—might kick up a fuss.

• • •

De Havilland Worries About Orders For Its Latest Comet Jet Liner

In the fiercely competitive business of building and selling jet airliners, Britain's De Havilland Aircraft Co., Ltd., has been dogged with bad luck. De Havilland's first big commercial jet, the ill-fated first of the Comet series, had to be withdrawn from service.

Now the vastly improved Comet IV—the first jet liner to fly the Atlantic on a regular schedule—is having troubles of a different sort. Despite a vigorous worldwide sales effort, the British company isn't getting enough orders to make its Comet IV project pay off.

De Havilland has sold about 30 Comet IVs. But, according to Chmn. W. E. Nixon, “no orders for the Comet have been forthcoming from the U.S., which represents more than 70% of the world market for airliners of that size, and it appears unlikely that a non-American company can achieve any substantial success in selling to U.S. operators.”

Nonetheless, De Havilland is going ahead with the design and construction of a new commercial jet, the Aircro 121. This aircraft is slated to enter service with British European Airways (BEA) in 1963.

• • •

Business Abroad Briefs

Japan's top taxpayer—for fourth straight year—is Kono-suke Matsushita, owner-boss of Matsushita Electric Industrial, who earned \$670,000 in fiscal 1958 from salary, stocks, and other sources. No. 2 taxpayer is Foreign Minister Aiichiro Fujiyama, a sugar-and-trading baron.

Montecatini on the march: Italy's chemical leader has signed up Britain's Imperial Chemical Industries and Shell Chemical to produce Moplen, a new polypropylene plastic. Montecatini also is joining with Bombay's Indian Dyestuffs Ltd. in a \$7-million expansion.

Communist China is pushing chemicals. Under construction—says Peking—are a 40,000 ton caustic soda plant in Shanghai, another 15,000-ton caustic soda plant and a 10,000-ton hydrochloric acid plant at Canton, a 120,000-ton sulphuric acid plant and an 80,000-ton soda ash works in remote Szechuan, and two large chemical plants with a variety of end products in central Hunan and Chekiang.

France Beats Back Inflation

De Gaulle's "truth and severity" program has already transformed the nation's economic affairs and outlook.

When Gen. de Gaulle came to power in France just about a year ago, the average Frenchman (and many outsiders) expected that his first great achievement would be to end the costly war in Algeria. Most French businessmen and economists felt that de Gaulle would have to solve the Algerian problem before he could hope to halt inflation in France and stabilize the wobbly franc.

However, one French economist—Jacques Rueff (picture)—sized things up differently. When the de Gaulle government was formed last June, Rueff had his eyes on the internal causes of French inflation. He felt that economic stability could be achieved by merely changing the government's financial policies.

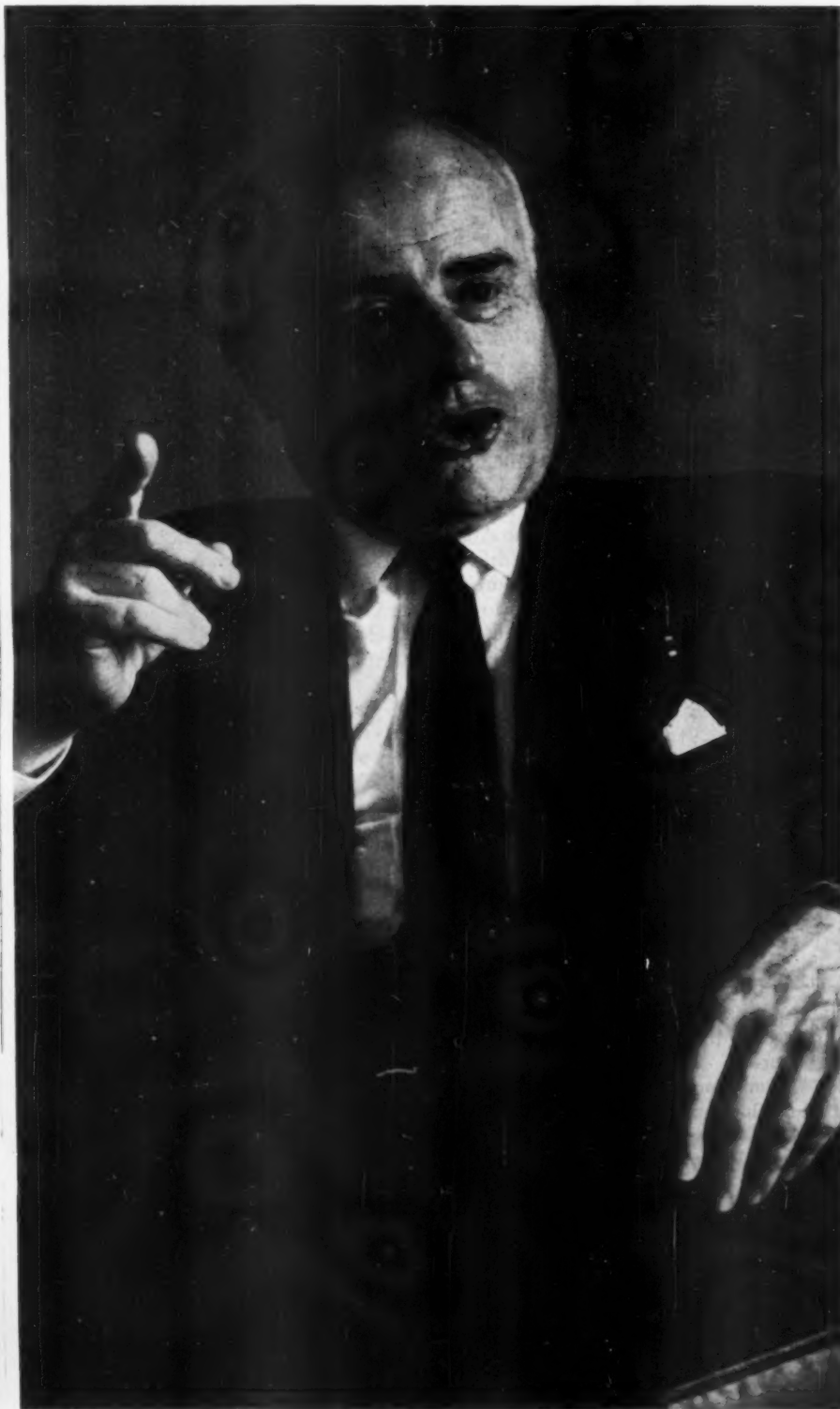
- **Financial Reform**—Rueff has proved to be right, at least for the short run. The Algerian war still rages; yet the French economy has been stabilized. In fact, Rueff himself had a large hand in putting the French economy on a solid footing.

Last September, Finance Minister Pinay made him chairman of a committee of experts whose task was to draw up a program of financial reform. The recommendations of this committee provided the basis for de Gaulle's "truth and severity" program—a reform of the French finances that is often compared with the "save the franc" stabilization program carried out by Premier Poincaré in 1928 when Rueff was an official in the French Treasury.

The de Gaulle program, promulgated by a series of decrees last Dec. 27, included a 17.5% devaluation of the franc plus drastic budgetary changes. It already has produced a striking transformation in the economic affairs of France. Prices have stabilized, the franc is strong, and exchange reserves have built up rapidly. Serious strikes, which some observers predicted, still haven't materialized.

I. A Critical Period

Looking back, you can see that France was on the verge of a real economic bust at the moment de Gaulle took over. From 1953 to 1958, French production had expanded at a rate of better than 5% a year. But French prices had gone up even faster—by almost 25% in the period from Janu-



ECONOMIST Jacques Rueff helped put France's financial house in order by recommending drastic overhaul of the national budget, with cuts in spending and increased revenue.



Another Tinnerman Original...

Nut-in-a-cage eliminates welding or staking...

SPEED GRIPS® hold themselves on panels!

Wherever you require a heavy-duty, multi-thread, self-retaining fastener, a Tinnerman SPEED GRIP Nut Retainer answers the need, holds down assembly costs.

SPEED GRIPS snap into place... some into panel holes... others over panel edges. No special tools or skills required. Spring-steel fingers grip the panel, yet let the nut float to compensate for normal panel-hole misalignment. Welding, staking and clinching are eliminated. SPEED GRIPS can even be applied after panels have been finished, avoiding paint-clogged threads.

SPEED GRIPS are available in a wide range of sizes and types, including front-mounting nut and bolt retainers for hard-to-reach or blind locations.

See your Sweet's Product Design File, section 8-T for data on these and other SPEED NUT

Brand Fasteners. Your Tinnerman representative has complete information and samples. If he isn't listed under "Fasteners" in your Yellow Pages, write to:

TINNERMAN PRODUCTS, INC.
Dept. 12 • P. O. Box 6688 • Cleveland 1, Ohio

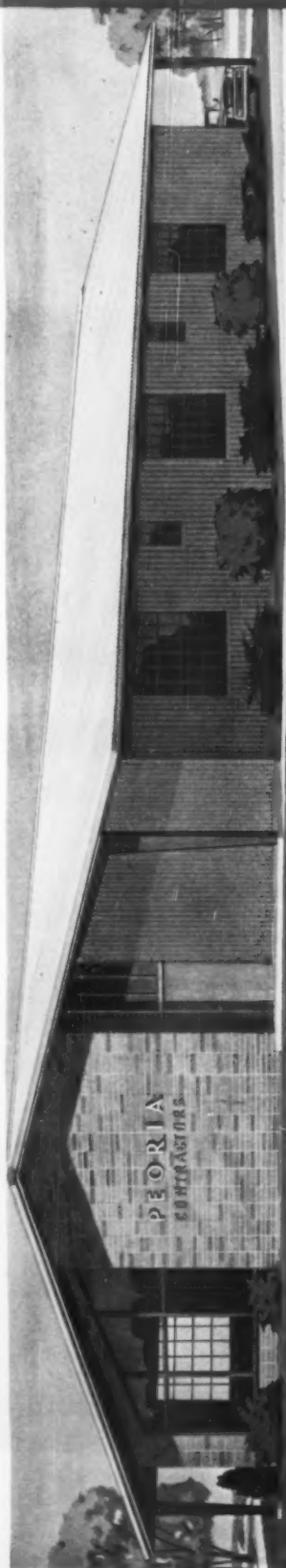
TINNERMAN

Speed Nuts®



FASTEST THING IN FASTENINGS®

STRAN-STEEL BUILDINGS—NOW IN COLORS!



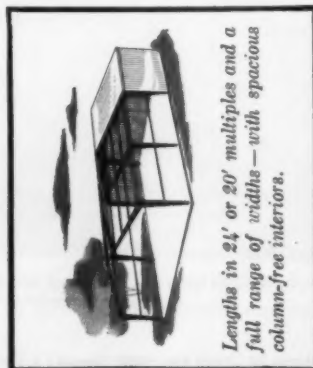
Rigid-Frame 40' x 100' industrial warehouse with spacious office facilities.

Colorful STRAN-STEEL buildings are made to serve your business better

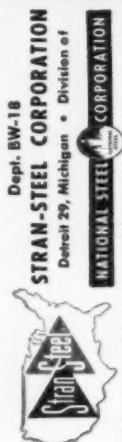
For a surprisingly low cost per square foot, you can own a good-looking, hard-working Stran-Steel building. Designed for your specific commercial or industrial operation—designed to help you step up efficiency—it's available in your choice of six factory-applied, baked-on colors (blue, bronze, green, gray, rose or white). Colors which are handsome themselves, and blend beautifully with brick, stone, wood or glass.

The low price of an efficient, good-

looking Stran-Steel building is made possible by precision mass production. Owning one almost always costs less than rent payments for similar space. Our five-year purchase plan, which requires an initial investment of only 25%, can be handled by your Stran-Steel dealer, who will also take responsibility for planning and construction, if you like. For full information, mail the coupon or call the Stran-Steel dealer listed in the Yellow Pages under *Steel Buildings or Buildings-Steel*.



Lengths in 24' or 20' multiples and a full range of widths—with spacious column-free interiors.



Dept. BW-18
STRAN-STEEL CORPORATION
Detroit 29, Michigan • Division of

NATIONAL STEEL CORPORATION

DEALERS EVERYWHERE

Stran-Steel Corporation, Dept. BW-18
Detroit 29, Michigan

Please send your Industrial Building Catalog.

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

ary, 1956, to June, 1958. What's more, this inflation had led to a steady drain of foreign exchange reserves. By June last year, after the political turmoil of May had accelerated the drain, the French government had only \$204-million left in its foreign exchange kitty (not counting \$575-million held by the Bank of France as a currency reserve).

In referring to this situation during a recent visit to the U. S. Rueff said: "On June 1, 1958, the game was up. However popular the expansion had been, no government—whatever its aspirations or its political complexion—could any longer escape the necessity of changing the policies which had made the expansion possible. A thorough-going reform of the public finances was indispensable."

Without such a reform, Rueff maintained, France would have been forced into a rigidly controlled economy, with an elaborate system of rationing and of other restrictions on private business.

• **Temporary Measures**—At first, Pinay met the crisis with temporary expedients. Last June, he imposed new taxes and launched a gold loan that offered substantial tax exemptions. This loan provided about 300-billion francs of new money (60-million of it in foreign exchange or gold), and eased the position of the French Treasury.

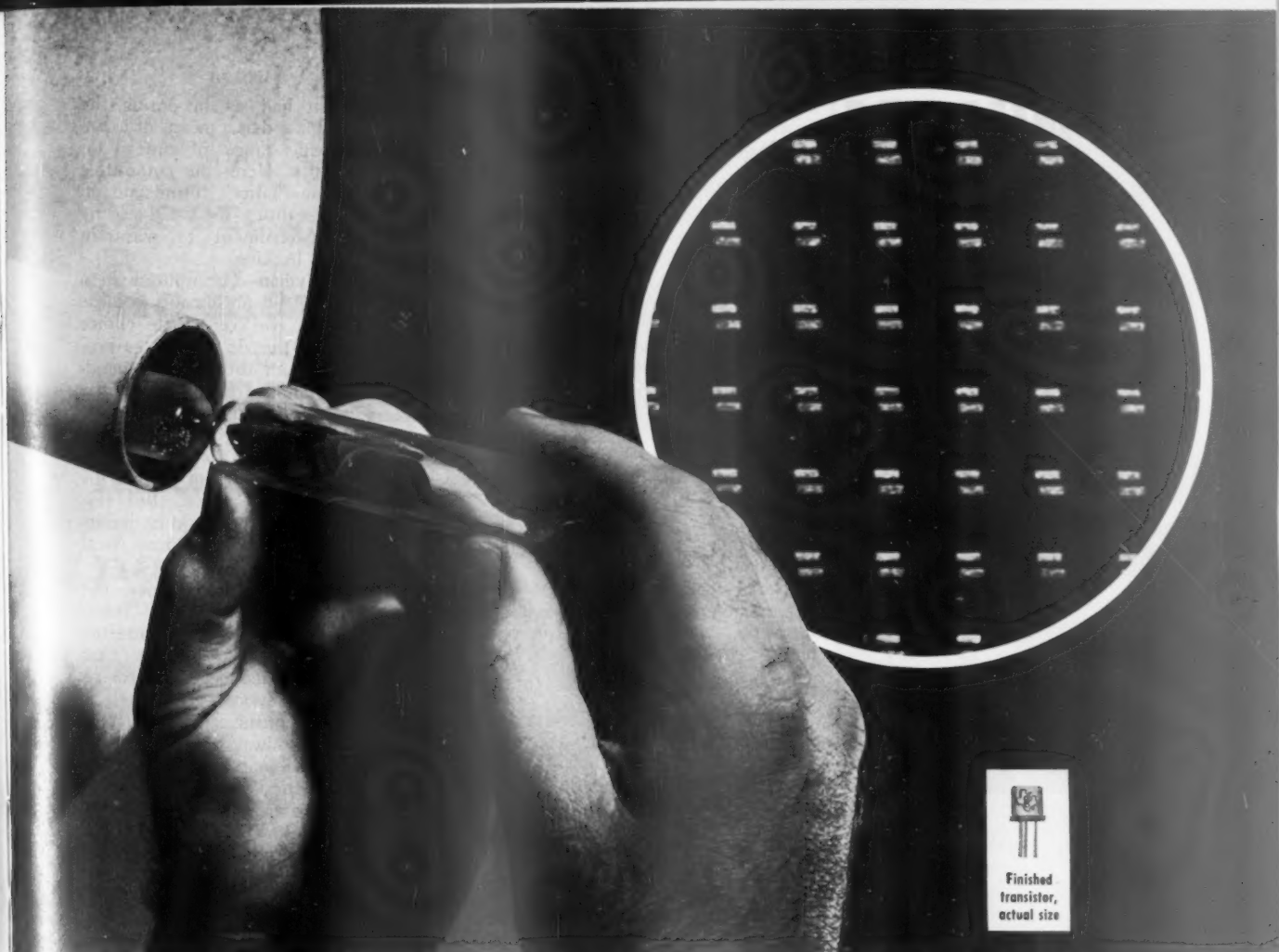
• **Drastic Surgery**—But Rueff and some of the top officials in the Treasury realized that this was only a holding operation. They were convinced that drastic financial surgery was needed both on the swollen French budget and on the over-valued franc. Otherwise, there would be no escape from a fresh exchange crisis and a controlled economy, especially since Paris could not count on being bailed out by the U. S., as it had been in many earlier financial jams.

At the same time, it seemed clear to Rueff and the others on his committee (which included two businessmen) that France could expect a bright economic future if only its finances could be put in order.

On the one hand, the population was increasing rapidly, and would soon turn France into a young and more dynamic nation. On the other hand, the French discovery of oil in the Sahara opened the prospect of a fuel source that could make France virtually self-sufficient in energy supplies—assuming that Algeria were not lost to France. Also, there was the prospect of rapidly increasing trade within the European Common Market, due to start Jan. 1, 1959.

II. Shoring Up

The Rueff committee had these hopeful prospects, as well as the grim ones, very much in mind when, last September, it began to screen the



26,000 TI transistors will be produced from the thin slices of semiconductor crystal seen in the container above being inserted in a diffusion furnace.

Here, precisely separated on a single slice of germanium crystal magnified 33 times, you see 40 of the more than a thousand transistor hearts produced per slice. Every one of these transistor hearts has had its base layer diffused in and the $0.002'' \times 0.006''$ aluminum emitter and gold base-contact stripes applied by high vacuum evaporation.

How transistors are born in Texas...26,000 at a time!

Dramatically advanced transistors are produced at Texas Instruments by diffusing materials directly into many slices of semiconductor material simultaneously. Identical transistors — each a solid mechanical unit — attain new pinnacles of uniformity and reliability. Starting with the introduction of the first commercially available diffused-base transistors — silicon type 2N389 in May, 1957, and germanium type 2N623 in March, 1958 — TI now produces diffused-base transistors that operate at frequencies of hundreds of megacycles (beyond television frequencies), that handle greater amounts of power, and that withstand severe shock, acceleration and vibration.

Result: detection and guidance systems for military weapons become faster-acting and more reliable; control and telemetering systems for missiles and satellites become more sophisticated; larger-scale data processing systems now operate faster and need only a fraction of their former power consumption, cooling and area requirements.

For over a quarter century, such TI creative engineering has made outstanding contributions to new developments in seismic exploration, instrumentation, military and commercial electronic systems, transistorization, and electronic components... contributions that improve your way of life personally, professionally, nationally.

TEXAS



keep an eye on T/I

**INSTRUMENTS
INCORPORATED**

6000 LEMMON AVENUE
DALLAS 9, TEXAS

TO WHOM IT MAY CONCERN

Industrial Systems Company specializes in the design and manufacture of automatic cleaning and treating machines and offers equipment engineered to meet the production washing requirements of any industry.

Whatever the material (wood, metal, plastic, glass), processing needed (washing, rinsing, drying, special treating, or any combination thereof), or particular production characteristics involved, Industrial Systems Company can supply the equipment you need for either independent or integrated operation.

It's to your advantage to learn what we have accomplished for others in industry and what we can also accomplish for you.

Your request for detailed information and free engineering consultation will receive prompt attention.



INDUSTRIAL

SYSTEMS COMPANY
Exclusive Sales Agents for
INDUSTRIAL WASHING MACHINE CORP.
31 Main Street, Matawan, N. J.



SLEEP LATER!



in the NEW Iowa

... you can take the car all the way to the plant—in minutes! No commuting! When everybody has that extra 40 winks, it makes a big difference in dispositions, production, and the way you look at your work. Look at the *New Iowa*. Send for Iowa Industrial Resources Fact Book. All replies held in strictest confidence.

IOWA DEVELOPMENT COMMISSION
325 Jewett Building, Des Moines, Iowa

budgetary estimates for the 1959 fiscal year and to look for ways of cutting the huge anticipated deficit.

Here's how the committee went about its job:

First, it looked at the estimated over-all deficit—about 1.2-trillion francs (over \$3-billion). The committee decided that this would have to be reduced by as close to 700-billion francs as possible. In picking this figure, the committee operated on the following assumption: Over the course of the previous five years, the French Treasury had never been able to borrow, without inflation, more than 500-billion to 600-billion francs. Therefore, if the budget were not cut, the Treasury would find itself compelled before the end of 1959 to have the Bank of France create several hundred billions of fresh inflationary credit in the form of advances to the Treasury. Thus, it was essential that the deficit be kept down to the amount that the Treasury could borrow on the market, or to somewhere between 500-billion and 600-billion francs.

In short, the committee established the principle that public expenditures must in no case exceed the amount available to the Treasury from revenue and savings taken together.

• **Revenue Increase**—Then, Rueff and his team set out to see how much of their proposed reduction could be gained by a cut in spending and how much by an increase in revenue.

On the revenue side, the committee ended up by recommending tax increases and tax changes estimated to produce 330-billion francs in additional revenue. By cutting estimated expenditures, it gained an additional 336-billion francs—for a total of 666-billion francs.

In examining the expenditure side of the budget, the committee broke down the projected 1959 spending into five main parts:

	Billion Francs
Capital expenditures	1,633
Military expenses	1,555
Expenditure on civilian services....	1,503
Economic subsidies	434
Social subsidies	834

• **Capital Spending**—Although the estimate for capital expenditures showed an increase of 26% over 1958, the committee decided against any reduction. The members felt that there was no room for a cut if housing, education, health, science, and basic public utilities were to be adequate to the needs of France's growing population, and if the standard of living were to be raised in Algeria.

They also wanted to use capital spending by the nationalized industries (much of their capital is supplied by the government) to offset the mild

recession that had set in during the spring of 1958, and as a means of maintaining a wide range of orders for private industry. Here, the committee had its eye on France's future and on the political realities—the need of the de Gaulle government to maintain solid business backing.

• **Military Civilian**—The military item also was left intact, presumably because the committee had very little choice but to accept the de Gaulle government's estimate of the military spending needed (about two-thirds of the military total) to maintain France's hold on Algeria.

Civilian expenditure (largely the cost of running the government) should be cut, the committee agreed. But this would be a long-run task, and no reductions could be expected during fiscal 1959.

• **Government Subsidies**—Under the heading of economic subsidies—"interventions économiques"—the committee found government subventions that were intended to reduce the prices of many goods and services—goods such as chocolate, rice, bread, and milk, and services such as railway travel.

Earlier governments had introduced these subsidies for a variety of reasons—to prevent a rise in the price index (which would automatically increase the guaranteed minimum wage), to encourage certain economic activities, or to help certain classes of producers. Both to save money and to help reduce the escalation of wages, the committee recommended that the economic subsidies be reduced by 196-billion francs, and the government agreed to an actual cut of 155-billion.

In the case of social subsidies, the committee managed a reduction of 81-million francs by proposing an increase in personal contributions and more economic management of government-supported social services. As part of this program, the de Gaulle government eliminated veterans' pensions except for the low-income groups—something that no one but de Gaulle could have got away with.

• **Price Hikes**—Finally, the committee recommended an increase in the prices of electricity, gas, and postal services, thus gaining another 100-billion francs and reducing the over-all deficit to less than 600-billion francs—or the sum available, by past standards, for borrowing on the market.

The committee then had to take account of the fact that some of its measures would inevitably result in an increase of prices. So it recommended that the government suppress, by public decree, all indexing arrangements that tied wages or agricultural prices to a price index.

The sole exception to this was an arrangement that the guaranteed mini-

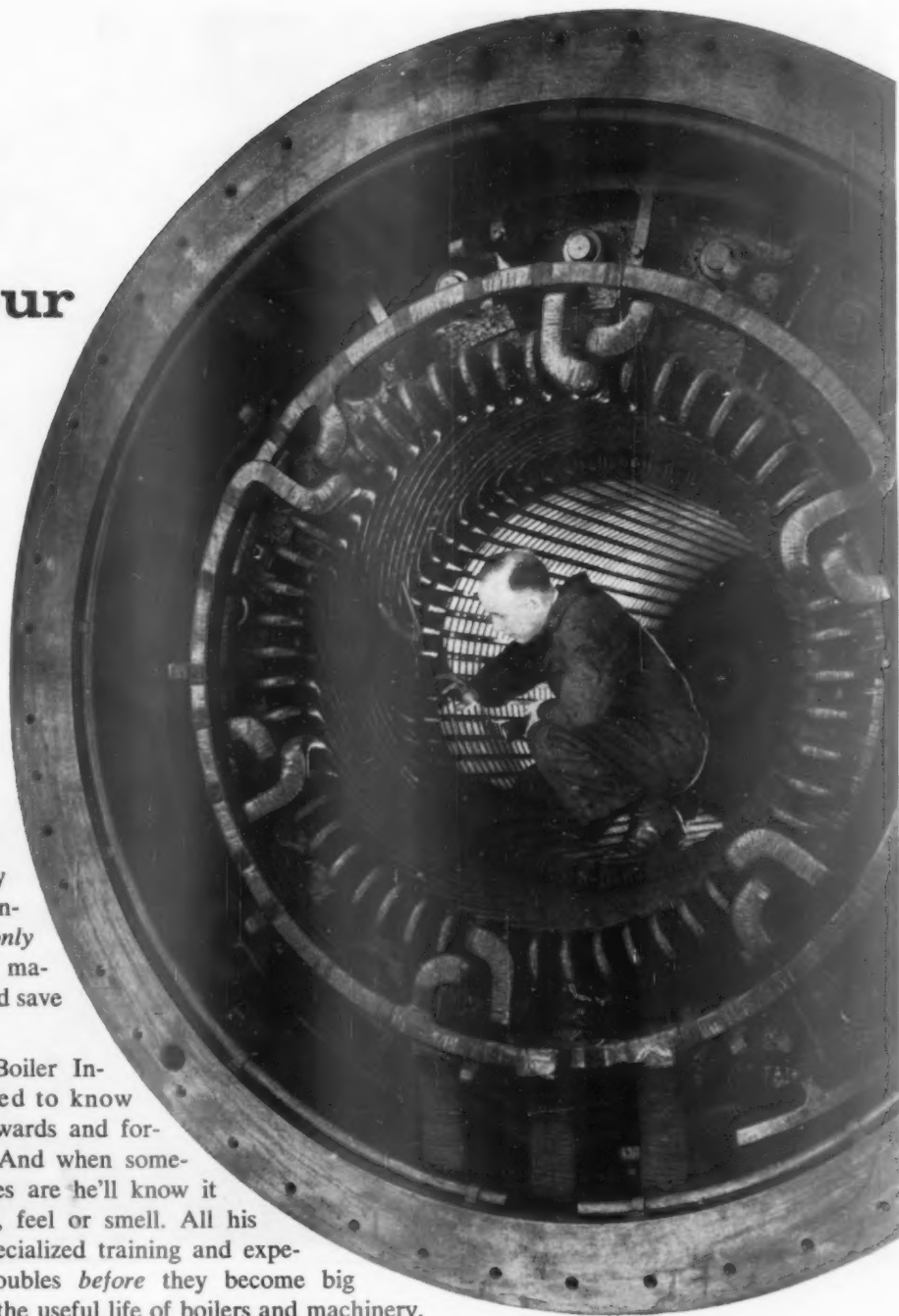
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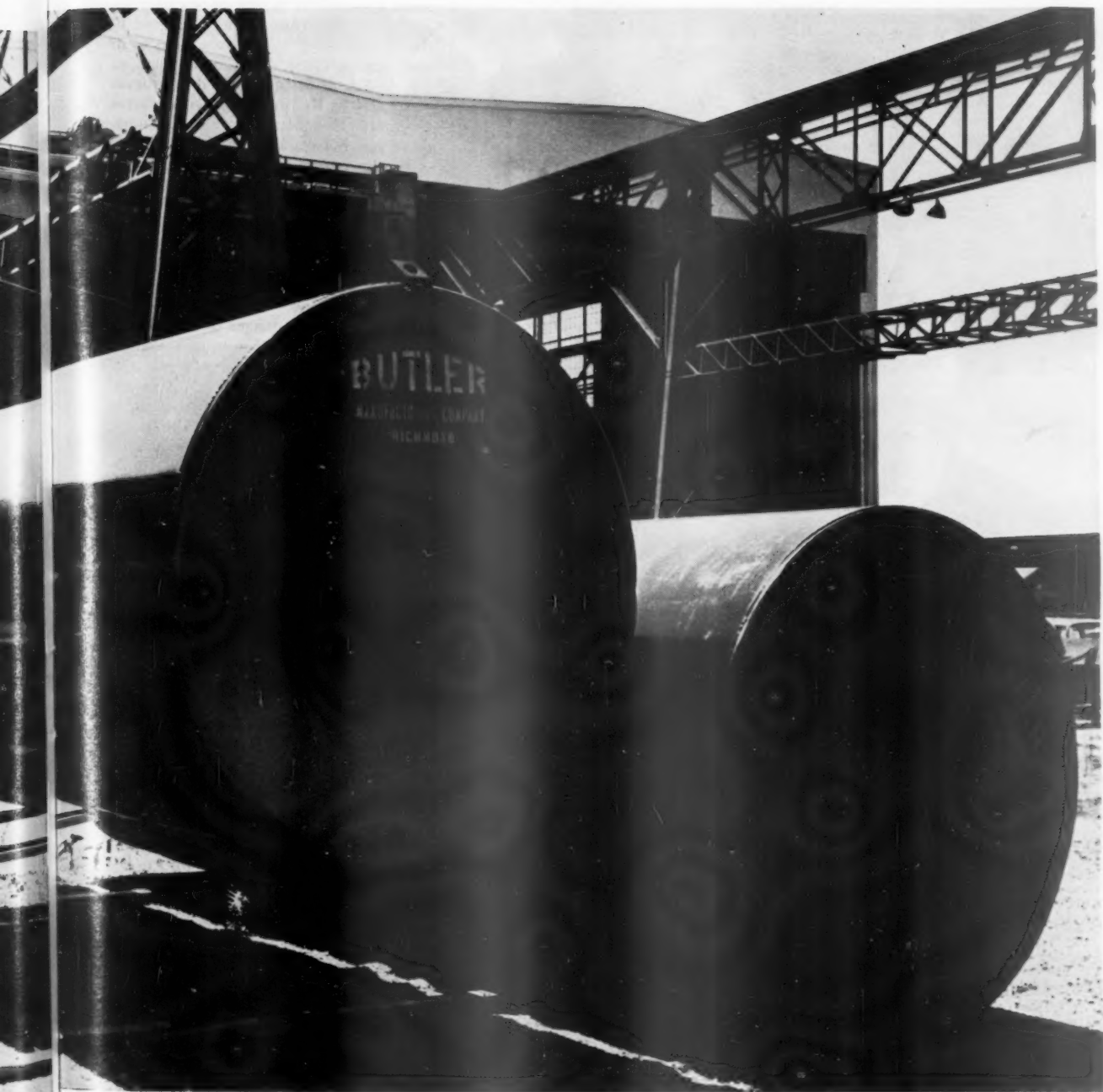
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minimum wage still is tied to an official price index. At the same time, the government authorized an increase of 4% in civil service salaries and an increase of 4% to 6% in the guaranteed minimum wage and in the prices of certain farm products. Despite these concessions, there has been a less-than-4% increase so far this year in the French price level. (Some government officials had feared that the increase might be 6% to 8%.)

The committee did not limit its recommendations to these changes in the budget and in domestic policy. It also urged some dramatic changes on the external side.

To remove the danger of an upward drift in prices, the committee argued that it was essential to reestablish the pressure of external competition by removing most of the quotas that were put on French imports during the financial crisis of 1957. It also recommended that France go through with all its commitments to the Common Market. These included both tariff and quota reductions.

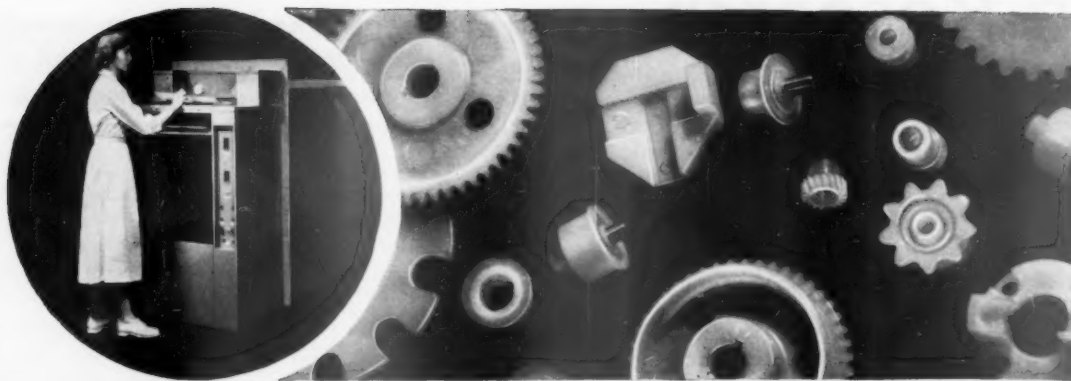
• **Devaluation of Franc**—Equally important, the committee recommended—and the government agreed—that the franc should be devalued as of Jan. 1, 1959, by 17.5%. By this measure, France would gain export business (even with heavy export subsidies, French sales had been lagging) and would increase the price Frenchmen paid in francs for imported goods.

Then, to underline the irrevocable character of the new franc rate, the committee had the government create a new monetary unit called the "heavy" franc, which is worth 100 of the old francs and is now going into circulation.

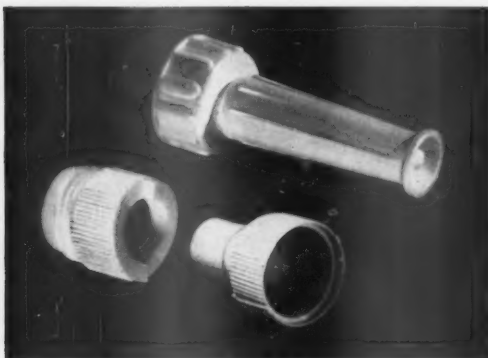
To clinch these external measures, Rueff wanted to see the Bank of France impose an emergency discount rate of 7%, then start bringing it down by easy stages. But neither the Bank of France nor the Treasury agreed to this, and Rueff himself has gone along with the recent reductions in the French bank rate. He feels that French interest rates must be brought down, both to cut the cost of carrying the public debt and to stimulate more private investment. In fact, tight money has not been used as an anti-inflationary weapon in the stabilization program that Rueff masterminded for Pinay and de Gaulle.

• **End of Task**—Rueff has now returned to his post as a judge in the Court of Justice of the European Economic Community (Common Market).

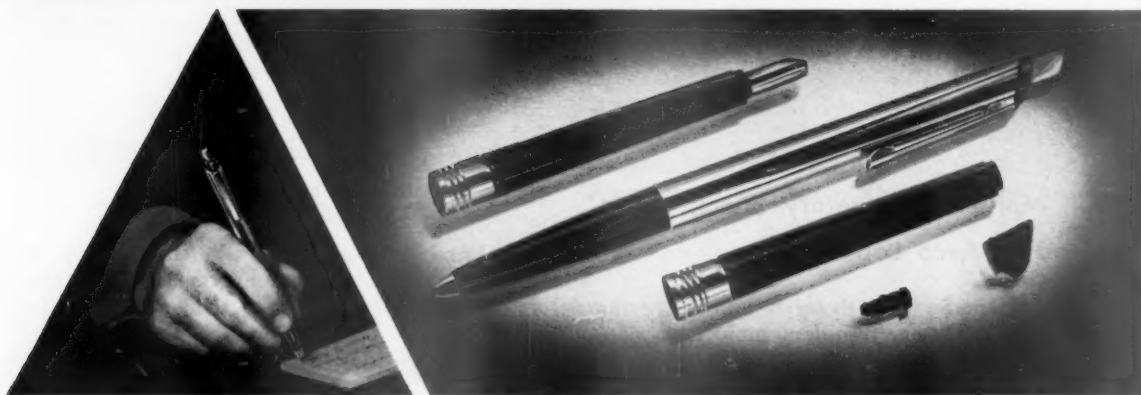
He is enough of a realist to admit that he could not have won approval for his program if de Gaulle had not been operating from June, 1958, to February, 1959, under emergency powers. He also realizes that the recession of the past year in France made it easier for the government to carry through his anti-inflationary program. **END**



X-RAY film processing machine uses gears and other rugged parts of ZYTEL. Components work smoothly, are unharmed by photographic chemicals and cost less to make and buy. (By Brook Molding Corp., Norwood, Mass., for Eastman Kodak Co., Rochester, N. Y.)



NOZZLE AND SNAP-ON HOSE COUPLINGS of ZYTEL are light in weight, tough, resistant to garden chemicals and low in cost. Easy-to-use couplings have no threads, no moving parts to wear. (By Franklin Metal & Rubber Company, Hatboro, Pennsylvania.)



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In Research

• • •

Computer Does Fair Job of Translating Russian Scientific Texts into English

The first practical mechanical method of translating Russian technical writing into English has apparently been evolved by the National Bureau of Standards, working for the Office of Naval Research.

NBS does not claim to have solved the probably unsolvable problem of machine translation for literature, but it believes that its method, once refined, will be suitable for scientific translations.

The key to the NBS system is the rigging of an electronic computer to scan the Russian original and weld the corresponding English words into a meaningful sentence.

Previous computer systems have done their translating on a word-by-word basis, and more often than not have ended up with pure gibberish. Now, NBS instructs its computer to change the words of the Russian sentence into a highly concentrated form for purposes of matching. Then the machine is told to recognize the syntactical relationship of the words. Finally, it fits English words together in a meaningful sentence.

The first sample translations have been neither elegant nor complete, but they have rendered the gist of the Russian material remarkably well. With further work, it is hoped that the computer will offer a practical way of getting Russian scientific texts into English fast.

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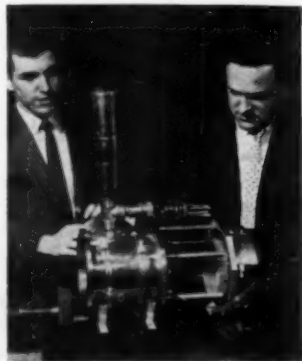
1-Million Mph. Interplanetary Shock Wave Duplicated in Avco Laboratory

Interplanetary shock waves that travel from the sun to the earth at more than 1-million mph. have been duplicated in the laboratory by Avco Corp., at Everett, Mass. The gas velocities, believed to be the fastest ever achieved in the lab, were attained in the 30-in. shock tube part of which is shown in the picture.

Avco used a 4-billion-watt charge to trigger the waves, which are the same type as those which cause the magnetic storms that upset radio and telephone communications.

In the Pioneer space probe experiments, it was learned that magnetic storms greatly increase the radiation count in the Van Allen radiation belt. Hence these "magnetic typhoons" might be very dangerous to space travelers. Creation of similar conditions in the lab is a long step toward devising protection for space-roving man.

Fundamental research also benefits:



MORE NEWS ABOUT RESEARCH ON:

- P. 80 Developments in neurology foreshadow major strides in control, prevention, and possible cure of some mental diseases.

• The achievement lends weight to a relatively new theory explaining what interplanetary shock waves are. For a long time, scientists thought shock waves depended on the collision of molecules or other particles of matter. But this theory just could not fit with what went on in space, where there are few particles to collide. Now the Avco experiment nails down the thesis that in space a shock wave is a collision of "force fields" surrounding hydrogen ions and electrons.

• Unproven theories on the nature of very high temperature gas (called plasma) are also bolstered by the work. Avco had to use gas temperatures of 1.5-million F in its shock tube. At this point, all known matter vaporizes instantly. So, the plasma (a rarefied mass of hydrogen) had to be contained in a magnetic wall. The method by which this was accomplished should add greatly to the slowly increasing understanding of ultra high temperatures.

Avco achieved its shock waves in the same lab that played a major part in research for the Atlas, Titan, and Minuteman ICBMs. Now the company is about to dedicate an associated facility at Wilmington, Mass. This \$23-million research center (\$16-million in Avco money, \$7-million put up by the government) will concentrate on the design, development, and testing of ICBM nose cones, and on other space problems.

• • •

Ceramic Fibers Make New Material That Withstands Extreme Heat

Horizons, Inc., Cleveland research company, has developed a method of forming ceramic fibers that will produce a product useful at temperatures as high as 4,500F.

The Horizons development, which the company feels is a major scientific breakthrough, applies only to the changing of the geometry of the ceramics to increase their applications. The company is not revealing any details of the process. The small fibers produced by the new technique can be matted into pads for insulation or, the company believes, made into thread, cloth, paper, and used for reinforcing in plastics.

By changing the geometry of ceramics from solids to fibers, Horizons can get high bulk densities. Air trapped in the fiber mats actually acts as the chief insulation, but the significance of the new method is that the ceramic fibers maintain their shape at high temperatures—retaining the air traps.

The process—still on an experimental scale—can be used on any ceramics, according to the researchers.

Work has been done on alumina, silica, and mixed oxides, but the most successful experiments have been with zirconia. Zirconium oxide appears to give the best physical properties—the longest, finest fibers. Alumina tends, for instance, to form flat ribbonlike fibers, which are not so useful in many applications.

It pays to call in New Departure...

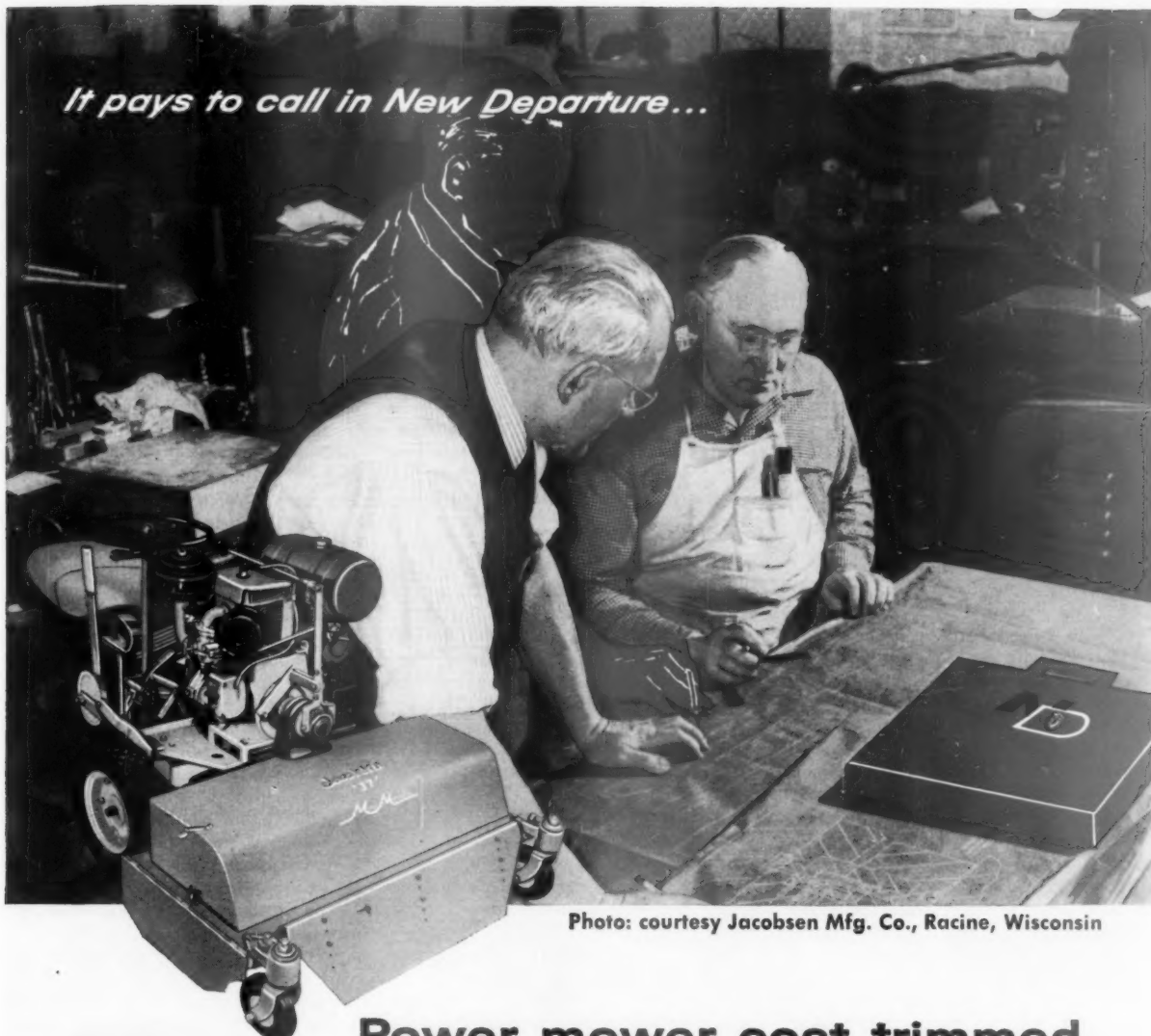
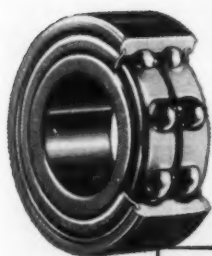


Photo: courtesy Jacobsen Mfg. Co., Racine, Wisconsin

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Perhaps the man from New Departure can recommend an N/D production bearing that will give your product the cost savings and added sales appeal you're looking for. For more information, write Department A-5.



NEW DEPARTURE

DIVISION OF GENERAL MOTORS, BRISTOL, CONN.

NOTHING ROLLS LIKE A BALL

Nerves Begin to Yield Secrets

● Scientists are using new techniques—among them the study of nervous reactions of fish to drugs.

● They have new drugs, new insights into the way the human nervous system operates and how it can be repaired.

● Result: the promise of a series of discoveries.

The fish, long useful chiefly on Fridays, is about to join the guinea pig, the white mouse, and the rhesus monkey as a contributor to scientific knowledge—and in the same passive way.

Researchers studying nervous diseases have discovered that the fish is an ideal subject on which to test the effect of nerve stimulants and depressants. The fish reacts sensitively, and in a manner startlingly similar to human beings, to the same drugs that influence the nervous system of man.

A tiny dose of tranquilizer, for example, will change a bloodthirsty fish into a tame, docile, and apparently contented one. A similar dose of a nerve stimulant will turn a timid sole into a raging tiger of a fish. Other chemical compounds will cause fish to lose their sense of balance, to swim upside down or flop over on their sides; some will even make fish swim backward. Physical damage to a fish's nervous system produces the same kind of symptoms as those found in the nervous afflictions of man.

• **Turning of Tide**—The use of fish in nerve research is still too new to produce any startling discoveries yet. But it's typical of the fresh angles that medical researchers are following in nerve research today.

In other fields, medical science has made great strides, with a long list of important new drugs in the past 15 years. In neurological research (the study of the nervous system and its disorders), progress has been slow.

Medical men hope that the new surge of effort will result not only in a fuller explanation of how the human nervous system operates but also in ways of protecting it against abnormalities and disease.

Cerebral palsy, muscular dystrophy, multiple sclerosis, and Parkinson's disease still incapacitate hundreds of thousands of Americans every year. And researchers still don't fully understand how the tranquilizers and so-called "lift pills" act on the system.

Now it seems as if the mist is lifting. In the laboratories of many medical schools, universities, pharmaceutical companies, the National Institutes of Health, hope is rising that major de-

velopments in neurology can be reported before long.

• **German Nerve Gas**—The University of Chicago has been a center of such studies since World War II, when the military joined there in research on poison gases. It became the place for postwar study of the Germans' new gas called "Tabun."

Unlike previous poison gases, Tabun was colorless, tasteless, and odorless. It entered the body with the air a man breathed, with the food he swallowed, or even through his pores, and it had a reputation for turning him insane before it killed him. However, it was never used in combat.

After the war, Allied soldiers tracked down a quantity of Tabun and shipped it to Chicago for analysis. It was found to be an organic phosphate—a discovery that led to development of a whole family of commercial pesticides with advantages over DDT, which had also just been developed. It also proved to have value in medical research.

In 1947, the Chicago research group was able to theorize that organic phosphates act as nerve poisons by inhibiting the action of cholinesterase, an enzyme vital to the functioning of the human body. Early this year, after

thousands of experiments, the group was able to say how it was done.

• **Works in Liver**—Once in the bloodstream, the so-called nerve poison travels to the liver, where it is converted from a relatively harmless substance to the form in which it attacks cholinesterase. Worse yet, it tends to gravitate to the very section of the liver that produces cholinesterase.

This discovery alone could help solve medical problems such as myasthenia gravis, a condition of muscular weakness brought on by damage to nerves. It could also lead to more accurate methods of testing the toxicity of some agricultural sprays and food additives, by applying the tests to liver tissue and by more knowledgeably observing the reaction of laboratory animals.

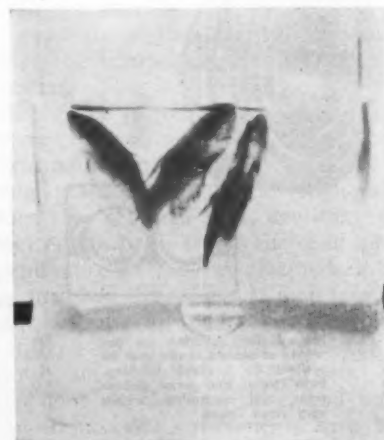
• **Electric Eels Help**—At the Columbia University College of Physicians & Surgeons, researchers have been using electric eels to help them study the action of enzymes in the nervous system.

First, they refined and concentrated cholinesterase. Then they studied its action on acetylcholine, a chemical that the nerves of the eel release as they discharge electricity. Finally, they sought a chemical that would react to the acetylcholine as the cholinesterase would. The chemical they settled upon is 2-pyridine aldoxime methiodide.

Now researchers at Columbia and elsewhere are studying the interaction between the nerve enzyme and the enzyme that is released by the nerves as they act. With a substitute available for cholinesterase, researchers can remove in laboratory animals the part of the liver that produces this substance, then



FISH in laboratory show much the same reactions to nerve drugs as humans do. Tiny dose of hypertension drug makes these Siamese fighting fish lethargic.

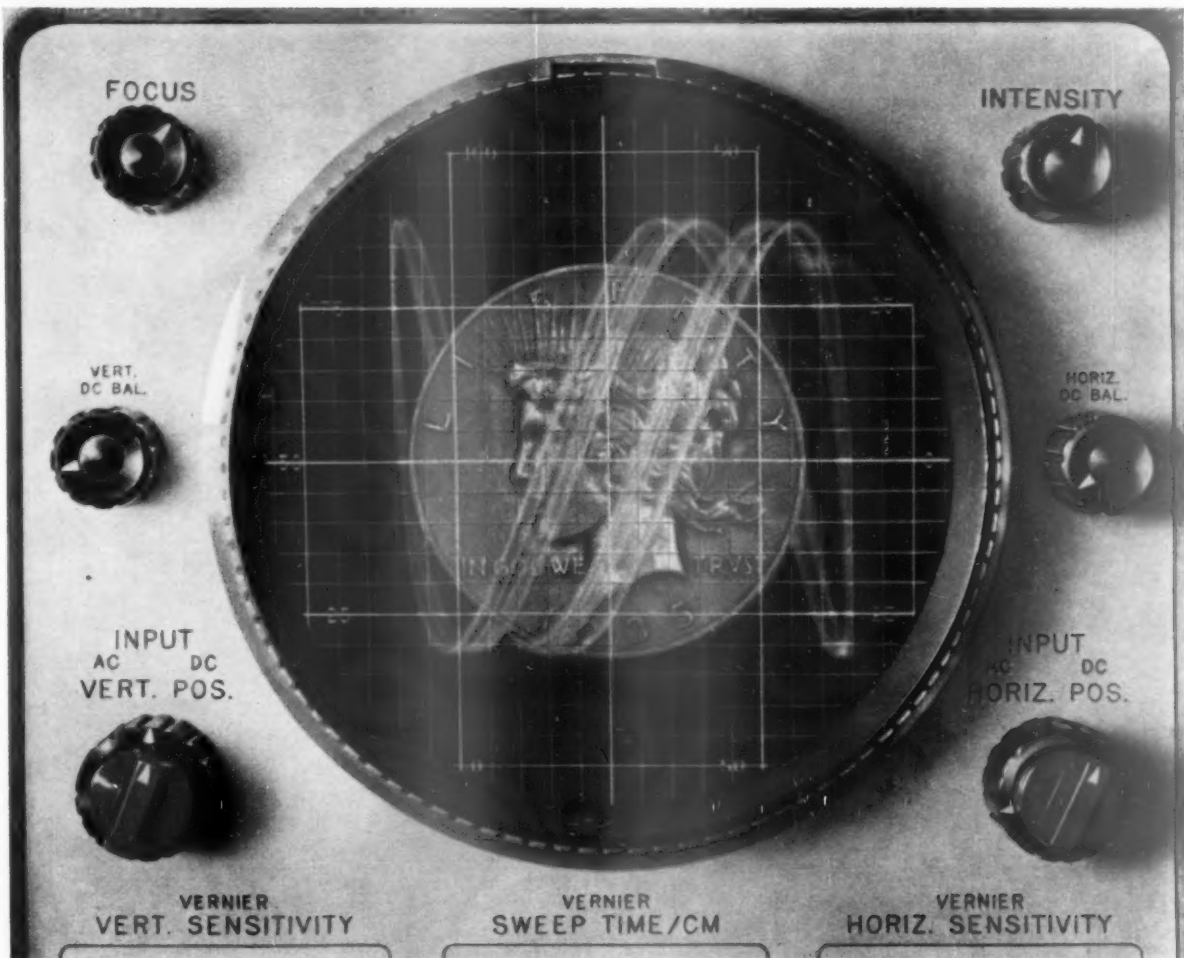


SCHIZOPHRENIA is produced artificially in fish, as it can be in humans. Study may reveal chemical deficiencies as causes of both mental and nervous diseases.



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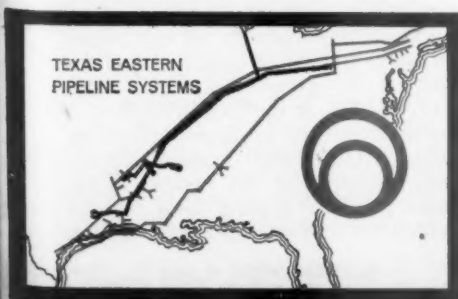
The natural gas processing plant at Falfurrias, Texas — one of the world's largest — processes some 325,000,000 cubic feet of gas daily — and, in the processing, recovers large quantities of valuable petroleum liquids, including natural gasoline, kerosene, butane and propane. A new gas-liquid separation plant will soon go into service in South Louisiana.

Texas Eastern Oil Division has grown, and will continue to grow lustily on a formula of planned expansion and diversification which has built Texas Eastern from an idea in 1947 to an \$800 million organization in 1959 — a busy, versatile worker in the service of the nation and all phases of America's petroleum industry.

OIL AND GAS: Exploring and Producing

NATURAL GAS: Processing and Transmitting

OIL PRODUCTS: Refining and Transporting



"... there is the possibility that doctors may learn to restore nervous functions in human beings..."

STORY starts on p. 80

carry out their neurological studies under closer control.

• **Model Nerve Cell**—In many company labs, the search is going ahead furiously to find ways to repair nerve damage. At Bell Telephone Laboratories, for example, scientists have just finished constructing an electronic cell that can become tired and react in many other ways similarly to a living nerve cell in the eye or ear.

Using several of these cells, other scientists are pushing ahead into even more fantastic areas—the building of whole electronic systems that imitate the simpler workings of the various nerve networks.

Those working in nerve research today are the first to admit the tentative nature of what they're doing. Bell researchers admit their synthetic nerve networks have only a vague similarity to the real thing. But, at least, it's a beginning. Only a few years ago, not even the most farsighted medical researcher could have envisioned the possibility of manmade nervous systems.

• **Rebuilding Cells**—An equally important discovery was reported to the American Assn. for the Advancement of Science earlier this year. Nerve cells, long considered incapable of regenerating themselves in the body after birth, have been observed to divide. This discovery, according to Indiana University's Dr. Warren Andrews, means that there is the possibility that doctors may someday learn to restore nervous function in human beings.

Indiana's experiments in which the regenerative power of nerve cells was observed were run on baby mice. The left facial nerve in each of 20 mice (the facial nerve is a typical motor nerve) was crushed. The mice were divided into five groups of four animals each, then sacrificed at time intervals of one day, two days, three days, one week, and two weeks. In each case the nerve cells of the crushed facial nerve were compared with those of the uncrushed facial nerve on the other side of the animal's head.

No regeneration of nerve cells was detected in the one, two, and three day animals. In the crushed facial nerves of the older mice, however, a startling thing was observed. Dr. Andrews, chairman of the Indiana School of Medicine's Dept. of Anatomy, describes what researchers found under the microscope as "very clear-cut figures of cells with two nuclei." Such double cells, he be-

lieves, are actually an early stage in formation of new nerve cells. In the vast number of cases in which human beings suffer nerve cell destruction, such a regeneration probably also starts, but, for some still-unexplained reason, it rarely goes to completion. The why of this, and the development of drugs to sustain the process, could well be the means to "grow back" nerve tissue in patients who have suffered nerve cell damage.

• **After the Fact**—At a less fundamental level, research into the human nervous system is also proceeding swiftly. At a meeting of the American Academy of Neurology in Los Angeles a fortnight ago, Dr. Benjamin Boshes of Northwestern University described experimental work in his laboratories using accelerometers (instruments used in wind tunnel evaluations of jet and missile models) to detect Parkinsonism in very early stages.

Accelerometers are taped to a subject's hands and feet and, after suitable amplification, his tremors are recorded on a graph. Doctors then sort out normal rhythmic tremors from the unrhythmic tremors that are indicative of incipient Parkinsonism.

• **Influenza's Role**—At the Harvard Medical School a big research project, just completed, points a strong finger of suspicion as to the initial cause of Parkinsonism and perhaps of other nervous afflictions, too.

Dr. Robert S. Schwab maintains that it is now practically proven that a major portion of the nation's 450,000 Parkinsonism cases are traceable to the big influenza epidemic during and following the first World War.

The Spanish flu, as it was then called, was in many cases complicated by encephalitis—viral damage to the mid-brain—which apparently in turn led to Parkinsonism some 10-15 years later. About 65% of known Parkinsonism victims were laid low by this particular flu epidemic. Subsequent epidemics, caused by other flu viruses, do not seem to be related to Parkinsonism.

Working on the strength of what they know about the apparent relation between the Spanish flu and Parkinsonism, however, medical researchers may be able to come up with chemicals to protect the nervous system against similar viral damage in future epidemics. One candidate at the moment is brain ganglioside—a complex substance of high molecular weight containing both starchy and fatty components. In tests on mice, this compound apparently acts as a sort of decoy, protecting the nerve cells in the brain from attack by viruses.

Further work along this line might turn up other decoy materials—chemicals that could someday form a sort of artificial suit of armor for the body's entire nerve network. **END**

How Airplane Builders Seek New Lines to Keep

INDUSTRIES



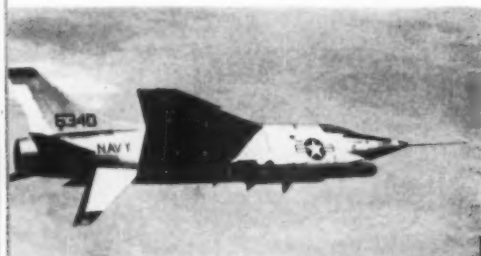
LOCKHEED made military name with planes like Navy WV-2 radar plane



BELL specialized in helicopters (left). Now it's moving into space with Hustler engine for Discoverer satellite (right).



CHANCE VOUGHT lost contract for F8U-3 Navy fighter (left). It's betting on commercial electronics for uses like airport Tower Control (right).



There's a tough period ahead for aircraft makers. It's painfully clear that military plane and missile contracts are dwindling in number, and commercial plane markets won't expand to fill gap. So they're rushing for new lines to hedge their future—and many will be far different in make-up five years from now.

The developments you see pictured on these pages—the new lines these airplane makers are switching into, both in and out of the aviation field—are only a sample of the extraordinary changes under way in the aircraft industry, and the baffling problem harrying its members, big and small.

Put bluntly, what these developments point to is this: The nation's largest manufacturing industry seems headed for real trouble. In fact, some in the industry itself say that some airplane makers are already in trouble.

While there is disagreement over the extent of the trouble, there is substantial agreement that the current

problems are serious enough to insure that the solutions found will shape the kind of aircraft industry the U.S. has 10 and 15 years from now.

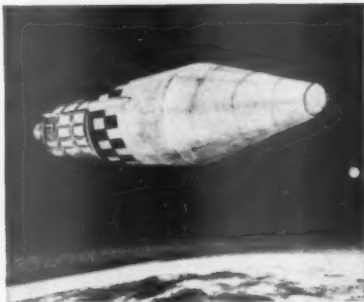
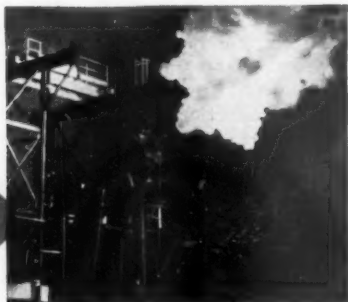
Not everyone in the industry would put it that bluntly. But they all agree they face a problem. Put broadly, the problem looks like this:

Something like 90% of the aircraft business is military business. And the day of the military airplane is nearing its end. Few in the trade are willing to concede that the missile will completely displace the manned airplane. But no one disputes that the number of airplanes required is going down, that the number of different types is going down

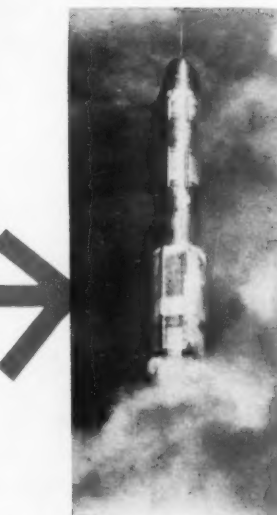
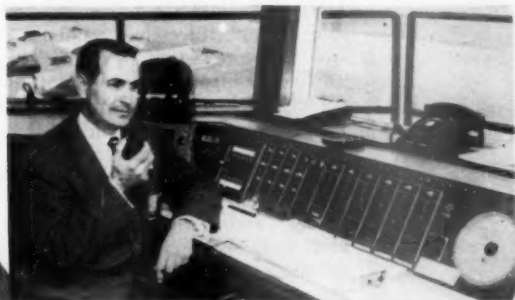
Aircraft Shifts Course

Themselves Strong

(left). Last month it bought a shipyard (right).



MARTIN had little success with Seamaster and 202 transport (left). But it went into missiles early, has Titan (right) as top project.



e to Fight Through Storms Ahead

even faster, and that what business remains is getting less profitable all the time.

Missiles, of course, are just entering their heyday. But it is becoming increasingly clear that missile production will never need the production facilities and manpower, will never produce the profits, that aircraft production did.

Commercial aircraft production has never accounted for more than 16% of the industry's output in the most peaceful years. Manufacturers, now at the peak of the job of re-equipping the airlines, can see no hope that commercial work can take up any big part of the slack.

All of which leaves the problem: What will an industry that today does \$12-billion in business and employs 760,000 be doing with itself 10 years from now?

The industry is in the thick of the problem right now, as a sample of current announcements indicates:

- Lockheed Aircraft Corp., in three breathless announcements, let it be known that it was launching itself in the nuclear submarine business, in missile ground facilities construction, and in military electronics—and that it was setting up an international subsidiary for round-the-world activity.

- North American Aviation, Inc.,

announced it proposed to buy Foster Wheeler Corp., builder of petrochemical plants, and maker of steam generating equipment for the utilities, the Navy, and the merchant marine.

- Mighty Douglas Aircraft Co., Inc., disclosed that it expects to show losses for the fiscal year ending Nov. 30, because its military orders are not enough to offset heavy start-up costs on its DC-8 jet transport.

- Small Fairchild Engine & Airplane Corp. put its 1958 losses at \$17-million—more than its profits for the previous five years together. Fairchild likewise attributed this to high start-up costs on a commercial plane, the F-27

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" . . . for companies unprepared for the changes ahead, the going could be rough . . . "

STORY starts on p. 84

Friendship, a turboprop transport for local service lines.

• **Wanted: A Future**—From one side or another, all these developments touch on the basic problem that's keeping the whole aircraft industry awake at night. Where it shows most immediately is in the way military planes get bigger and bigger—and production runs smaller and smaller.

Meanwhile, missiles mean even smaller production runs—perhaps 150 Atlas ICBM's will be ordered, for example, compared to postwar runs of 2,000 B-47 bombers and 7,000 F-86 fighters.

Not that total defense spending is shrinking. The defense budget is actually tilting upward, and aircraft people look for it to stay near its present level for 20 years. But fewer different aircraft or missiles will be ordered, fewer copies of any model bought. More defense money, too, goes into advanced research and development. Old models are phased out, contracts canceled.

With that prospect, what does an airplane builder do to keep its plants and working forces busy—and its stockholders happy? To find the answer, the airplane companies are on the hunt for something to insure their future—to keep them in business and their books in the black for 30 years more.

• **Tests Ahead**—That's why Lockheed and North American are diversifying. Though among the more successful aircraft builders, they must look to new fields to hold their places in a fast-changing scene, and to grow.

The Douglas and Fairchild losses, on the other hand, indicate that commercial aircraft production may no longer be an adequate, or at least a profitable, alternative for companies whose military sales are declining.

For companies unprepared for the changes ahead, the going could be rough. Those that haven't expanded into missiles haven't delved deep into research and development, and those that have tied themselves to one customer or one plane, will run into the bumpiest flying.

I. Electronics Revolution

The stormy period that's coming up, of course, is by no means the first for the aircraft builders. Despite the youthfulness of aircraft and missile making as an industry, the aircraft industry has been through some hair-

raising transitions, from World War II's boom and bust on.

The current and prospective shifts in military business are the concern mainly of the 13 prime aircraft manufacturers (pages 93 and 94), ranging in size from Boeing Airplane Co., with \$1.7-billion sales last year, to Fairchild Engine & Airplane Corp., with \$148-million. Last year, these 13—with total assets topping \$2-billion—handled 72% of the \$11.8-billion spent for aircraft and missiles.

Yet on one weapon alone, the prime manufacturer and his chief subcontractors may do business with 60,000 subcontractors and vendors.

• **Black Boxes**—The first big postwar turnaround in aircraft's ways of doing business came with the defense buildup during the early cold war period and the Korean hot war. Up till then, airplane makers used more or less standard landing gear, engines, radios, and so on, furnished by the government.

But as the science of electronics leaped forward and weapons became more complex, the aircraft companies, as prime contractors, had to have a say in the design, and later the management, of the entire weapons program. The idea of the airplane as a system was born. In some cases entire planes were designed around the electronic "black boxes."

With the advent of missiles, electronics enlarged its empire. It got a hand not only in the missile itself, but in the ground facilities to guide it.

• **New Battle**—All this brought tough new competition for the aircraft dollar, blurred the boundary lines of the aircraft industry. Electronics companies began to go out after prime contracts on missiles; today, some of them even try to latch onto prime contracts on aircraft that have half their value in electronics gear. Some aircraft companies fought back by invading the electronics field themselves (BW—Jun. 14 '58, p90).

Aircraft companies lost their lengthy production runs. Much of their plant and facilities became obsolete. Production workers were displaced by higher skills. More engineers were hired (BW—Jan. 10 '59, p111).

II. \$10-Billion Weapons

The swing to missiles forced all airplane makers to recalculate their future. Now, with their heads still groggy from the figuring, they find they have to recalculate it all over again.

What's making the calculators buzz this time is basically the result of one inescapable fact: The fantastic technological improvements in aerial weapons systems have shoved weapons costs right up through the roof. So the armed forces can afford only a few

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"... Atwood doesn't think a missile duel will settle a war . . ."

STORY starts on p. 84

weapons systems, where only a few years ago they would buy dozens.

There's need of fewer individual weapons, too. As Pres. J. L. Atwood of North American bluntly explains: "A few B-70 bombers could obliterate a continent." The same goes, with even greater force, for missiles.

• **Parallel Course**—Atwood and others insist that missiles are not going to drive military planes out of the skies for a decade or two, if then. Intercontinental aircraft flying at least 2,000 miles an hour are needed, Atwood believes, to destroy "residual" atomic capabilities of the enemy; he doesn't think a missile duel will settle a war.

Atwood's presentation of this idea of parallel development of aircraft and missiles was well received by Congress. Intelligence studies indicate Russia is following a like course.

• **Shrinking Market**—Whether it's aircraft or missiles, the cost of the new weapons is soaring in such a giddy climb that a few of them are going to preempt most of the procurement funds.

You can figure how things are going from some high-level talk. Brig. Gen. W. A. Davis, deputy for procurement in the Air Materiel Command, says a modern single-weapon system could cost as much as \$10-billion (including, of course, development and production, and recruiting and training of personnel). That's equal to all the bombers, fighters, and transports purchased 10 years ago. And a defense budget doesn't have too many \$10-billion chunks in it.

Ward B. Dennis, Northrop Corp.'s director of development planning, goes even further. He says, "Theoretically you can build one weapon system that could absorb the entire defense budget at one shot."

It hasn't come to that yet. But, Dennis argues: "The Air Defense Command now has six different interceptors. In the future it will have just one, and that will be the Mach 3 F-108 built by North American."

Northrop has calculated that in 1946-50, an average of three and a half new weapons systems was contracted for each year; and in 1954-58, five. But for 1959-63, Northrop sees just one new weapons system a year.

• **Hotter Race**—That means everybody jumps into the race for every weapon.

A few years ago, you could expect North American, Lockheed, Republic, and Convair to bid on Air Force fighters. You could expect Convair, Grumman, Chance Vought, McDonnell, and

Douglas to go for the Navy fighters. Now all 13 primes are fast with their bids on every proposal.

It's a hotter race now—with plenty of losers. Chance Vought Aircraft, Inc., got a jolt last December when its contracts for the F8U-3 Navy fighter and Regulus missile were canceled. Bell Aircraft Corp.'s principal missile contract, for the Rascal, was blue-penciled at the same time. Fairchild lost its contracts for the Goose missile and J-83 light jet engine.

• **Stabilizers**—But there are still a few brakes on the dizzy plunge toward that hypothetical all-encompassing weapon system that would gobble up the whole defense budget and leave all but the lucky winner out in the cold.

One stabilizing influence is the fact that the new weapons systems are so complex that they have to be spread out among the large companies. The B-70 program, with North American as prime contractor, is so large that major subcontracts have gone to Boeing, Lockheed, Convair, and Chance Vought. Martin is a subcontractor to McDonnell for the wings of the F-101 Voodoo fighter. A quarter of Northrop's backlog is in subcontracts to others.

Lockheed's Vice-Pres. Dudley E. Browne sees much more of this in the future, "to prevent the constant flow of manpower and dollars from one area to another."

Another stabilizer is that with fewer new weapons on order, the armed forces will have to extend the useful life of older systems, to fill gaps and maintain constant readiness. This means considerable business in modernization, rehabilitation, and maintenance.

III. Which Way to Turn?

Subcontracting and modernization help to bring in dollars, but they're not the same as being top dog in designing and making products, or managing a weapons system. And they're not a complete answer for an aircraft company looking to boost its sales as it sees the hitherto staple plums of the military aircraft business getting farther and farther out of reach.

So the net effect is to send smart companies scurrying into diversification, to find new products or new markets to fill the gap.

• **Looking Next Door**—The simplest place to look, and perhaps the best immediate protection, is right next door in missiles. This gives a company a crack at both missile and aircraft business.

Some companies have done well in catching the shift to missiles. Over-all, missiles today take 25% of the dollars spent on aircraft and missiles. In 10 years they'll get at least 50%. Some

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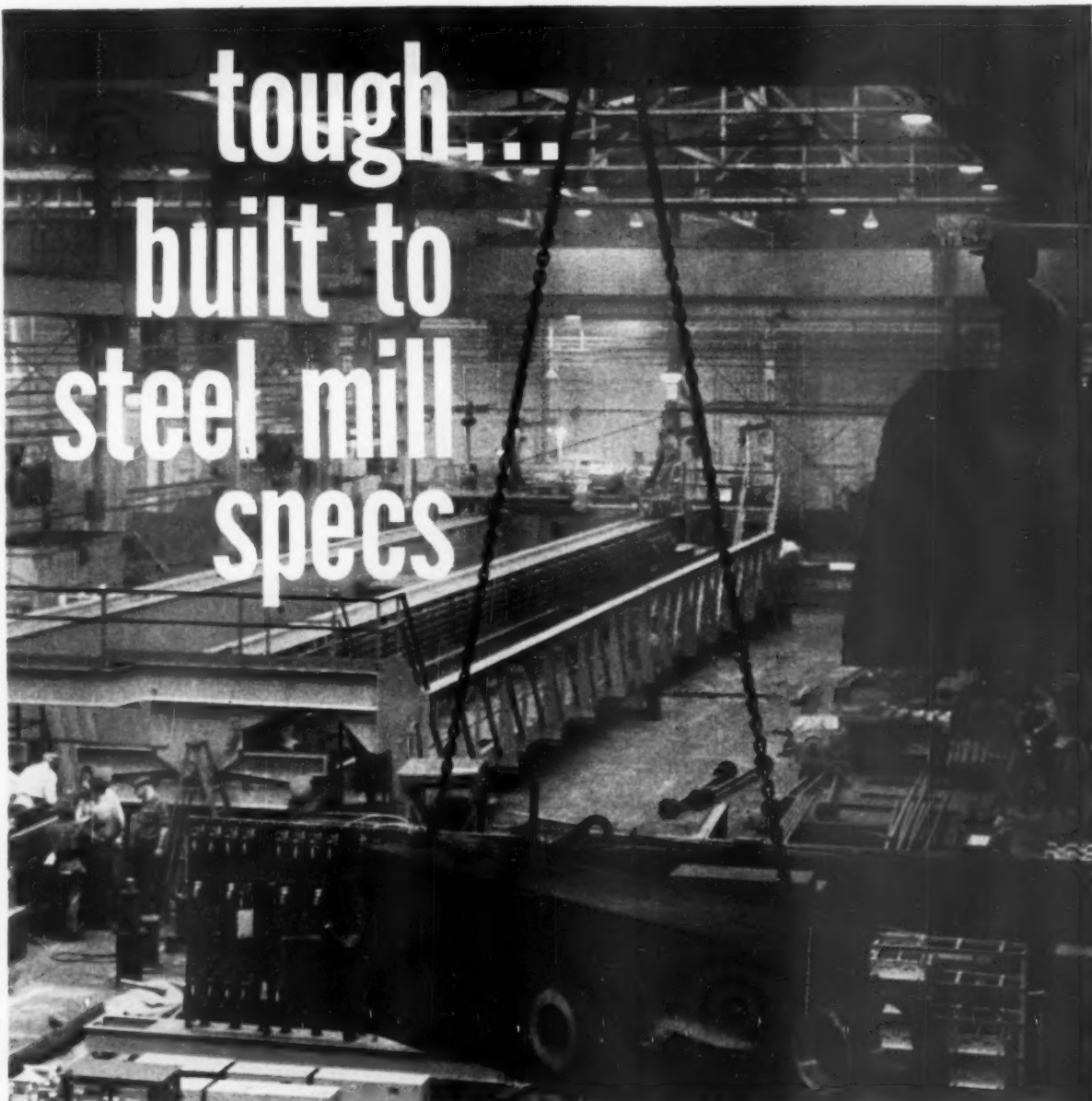


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"... space business isn't likely to come along fast enough to keep profits flowing..."

STORY starts on p. 84

companies have already bettered that mark. Martin Co. has 60% of its sales and 72% of its backlog in missiles. Northrop's backlog is 64% in missiles and electronics. McDonnell Aircraft Corp. was late in the field, but means to be "90% in missiles and space" within 10 years.

• **Leapfrogging Into Space**—But missiles are subject to the same contract attrition as aircraft. So ever since the first Sputnik, the aircraft companies have had their telescopes trained on the blue yonder, trying to figure how much business there will be in space, and how soon. Republic Aviation Corp., which admits it missed the launching on missiles, plans to leapfrog into space. One of its projects is a "plasma" engine for propelling space vehicles.

But the sad fact is this: Space business isn't likely to come along fast enough to keep the profits flowing, except for additional business that comes in from space projects making use of current missile and rocket engines.

• **Back to Electronics**—So other companies are reluctantly taking their eyes off the stars, and making a thorough search of their own back yards for new profit angles they may have overlooked. Many are finding these angles in the growing application of electronics to airplanes and missiles.

North American, for example, does \$100-million a year in electronics, Northrop about \$60-million.

Lockheed has just set up a separate electronics division to go after military business, and eventually commercial orders, too. Vice-Pres. Browne, who is secretary of Lockheed's long-range planning board, explains why.

"To hold your position today, and to make profits," he says, "you must have in your own plant a sufficient portion of the dollars that are involved in the weapons systems you get. If you don't make the electronics yourself, you have already lost too big a portion of the contract."

Some figures bolster the point. One manufacturer estimates that electronics now accounts for 48% of the dollar cost of air weapons, against 16% in 1945. A most conservative estimate might put the current figure at 25% for all aircraft, 35% for missiles.

• **Lost Anchor**—The traditional anchor to the windward for Douglas and Lockheed—commercial transports and other commercial aircraft—seems to have given way, at least as far as profits are con-

cerned. This was also an off-and-on thing for other companies.

It's a serious question how much Douglas and Boeing will make on their new jets; costs are running above the estimates on which prices were quoted to the airlines. Boeing will do better than Douglas, because its engineering development costs were largely written off on its Air Force tanker-transport. Convair, last in with jets, may not do so well as either of them.

Fairchild says it wrote down losses of \$29-million last year on its F-27 Friendship turboprop, including anticipated losses in 1959 and 1960. This was figured on the basis of ultimate sale of 100. But now Fairchild is running into sales resistance. Several local service carriers are replacing their venerable DC-3s with bigger piston-powered Convairs, and are considering a turboprop Convair to be built by Canadair Ltd. Cost of the Convairs is several times the F-27's, but they have more seats.

Lockheed, which plumped for a medium-range turboprop rather than compete on long-range jets, now spends a "tidy sum" each year engineering a 2,000-mi.-an-hour jet. But it concedes the cost may be too high for the airlines, says it's "becoming more difficult to design airplanes for a capital-short customer like the airlines."

• **Still Room**—The lost luster of the jets, however, doesn't mean there's no room left in the industry's own backyard for diversifying. Grumman Aircraft Engineering Corp. is even finding scope for diversification in military business. Grumman has been a traditional producer of Navy fighters and amphibians, and still is turning out high-performance jets. Just last month, it got a \$102-million contract for a new Navy attack plane, the A2F-1.

But Grumman thinks it's risky to put all its bets on high-performance planes, which have to buck the missiles. So it's going in for "work horse" planes, too—an anti-submarine plane, an early warning plane, a cargo-passenger plane, a twin-engine amphibian for air-sea rescue work.

It has picked up a new customer in the Army, with an observation plane that can do short take-offs and landings. It has gone commercial, too, with an agricultural plane and an executive transport.

IV. Hedging All the Way

Some aircraft companies, ranging through the whole traditional aircraft field and straying into the neighboring pastures of missiles and electronics, have put down stakes here and there—at promising locations—but still aren't satisfied that they've found the key to the future.

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versification has been cropping up—a jump that takes the companies completely out of the aircraft field.

This may be surprising, but in one sense it's not new at all. After World War II, many aircraft companies went blithely rushing into civilian products—and promptly fell flat on their faces.

That makes the new move seem a bit questionable at first. But in reality, the aircraft companies are trying something different this time. Then they were trying to build items for the retail market, where they had no experience and for which their overhead was too high.

Now such companies as Lockheed and North American are heading into things that fit their traditional way of doing business—which is to sell to order products with an enormously high unit price-tag.

• **What They're Doing**—Lockheed's acquisition of Puget Sound Bridge & Dredging Co. (BW—Apr. 4 '59, p38) follows this line. It broadens Lockheed's weapons capability by putting it into nuclear submarines, which Lockheed believes "will be the capital ships of the future." Puget Sound's experience in managing large construction projects also helps Lockheed into the business of building ground support facilities for missiles.

North American's venturesomeness isn't new; it got into electronics, rocket engines, and nuclear reactors right after World War II, and these divisions provided one-third of last year's \$904-million sales.

But now it's venturing further. Last year it helped form Astrodyne, Inc.—it has a half-interest—to specialize in solid propellants. Its proposed merger with Foster Wheeler (BW—Apr. 11 '59, p36) will consolidate its position in nuclear power, give it, too, an "in" in building missile support facilities.

• **Philosophy**—Lockheed's Chmn. Robert E. Gross outlines the philosophy behind his company's move. Lockheed, he says, seeks a reasonable growth rate of 9% a year, the average rate of sales growth of the 38 largest industrial companies over 30 years. To maintain its present position, he points out, it must at least parallel the 3.25%-a-year rise in gross national product.

This can't be done with military business, he contends; Lockheed calculations indicate a maximum rise of 2.75% a year in defense expenditures, and "we cannot reasonably expect to gain for ourselves a greater share of the defense market than our historical 7%."

The alternative is to "broaden into non-defense work." Lockheed looked into 85 different industries, found 25 of them would more or less fit its aims. Ironically, adds Vice-Pres. Browne, road-building and construction equipment seemed the best hedges, for "if aircraft

and missile sales should fall off alarmingly in a peaceful world, the government would have to provide some sort of public works; and roads are ideal."

• **Dissenters**—Not all companies see outside diversification as the remedy for their ills. Republic Aviation stands foursquare on the position that its business has been 90% in airplanes for 10 years, will be 50% in planes 10 years from now and only somewhat less in 20 years—with the rest in missiles and spacecraft.

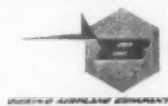
Martin Co.'s view is different. It's well into missiles and electronics, has nuclear projects, wants to latch onto more of the weapons system, both in electronics and propulsion. But it shuns commercial work. Says Chmn. George M. Bunker, "if peace should come and cut defense work, we would liquidate what we have left and go out of business."

• **No Disengagement**—Diversification or not, one thing is certain: No aircraft company plans any voluntary disengagement from military business. They aim to keep their current percentage and in some cases, hopefully, to enlarge it. All of them made that clear to BUSINESS WEEK reporters.

But they're not anxious to increase their dependence on the military. North American's Pres. Atwood comments, "We are not interested in buying a company that is solely in military work."

And they're looking for hedges for the future, new ways to grow.

• **Where They Stand**—Here's a brief rundown on where the 13 prime aircraft manufacturers stand, in military business and in developing new lines.



BOEING AIRPLANE COMPANY

Boeing Airplane Co., with 1958 sales of \$1.7-billion and a fat yearend backlog of almost \$2.5-billion, sits on top of the heap—and is likely to stay there as far as missiles and aircraft go.

In all, it has received 151 orders for its 707 commercial jet liner, 39 for the smaller 720, and has delivered 19 of these orders. From the military, it got a \$320-million follow-on order for the B-52 bomber last July, is slated for more contracts. In missiles, it's in production on the Air Force's ramjet-powered Bomarc.

In development, Boeing's big coup this year was a contract for assembly and test of the solid-propellant Minuteman ICBM. Some observers say this contract could go on for 20 years.



DOUGLAS AIRCRAFT COMPANY

Douglas Aircraft Co., Inc., is the industry's best example of how fast fortunes can change. In 1955, there didn't seem to be a cloud in its sky (BW—Jul. 16 '55, p82). Now it expects a net loss

for the current fiscal year; and first-quarter sales dropped from \$312-million in 1958 to \$227-million this year.

There is some question whether its DC-8 commercial jet (140 orders) will be as profitable as the piston-powered commercial aircraft of former years. Loss of the Minuteman competition to Boeing this year was a heavy blow, but Douglas recouped somewhat winning the contract for the air-launched ballistic missile (BW—May 9 '59, p36).

Yet Douglas, with \$1.2-billion sales last year, still stands second in the industry. Its Feb. 28 backlog of \$1.5-billion was nearly half in commercial orders. It has two Navy bombers and the Air Force C-133 turboprop transport in production; also the Nike Hercules, Genie, and Thor missiles.

CONVAIR
A DIVISION OF GENERAL DYNAMICS CORPORATION

Convair Div. of General Dynamics Corp. got into the commercial jet race after Boeing and Douglas; it has orders for about 70. The parent company no longer breaks down sales by divisions, but observers give Convair 70% of General Dynamics' 1958 net sales of \$1.5-billion. This would put it in third ranking in the aircraft industry.

Convair is fairly well balanced in aircraft and missiles, but there are clouds in sight. It's increasing output of the Air Force F-106 interceptor, but production will probably end early in 1961. Atlas ICBM is a strong point. It has the Navy Terrier and Tartar missiles. And it won the contract to design the first nuclear bomber.

LOCKHEED
AIRCRAFT CORPORATION

Lockheed Aircraft Corp., in addition to its new diversification, is well balanced in aircraft production—up through 1960, at any rate. Its \$375-million contract to supply its F-104 fighter to the German Air Force will keep production lines going after U.S. Air Force output ends this year.

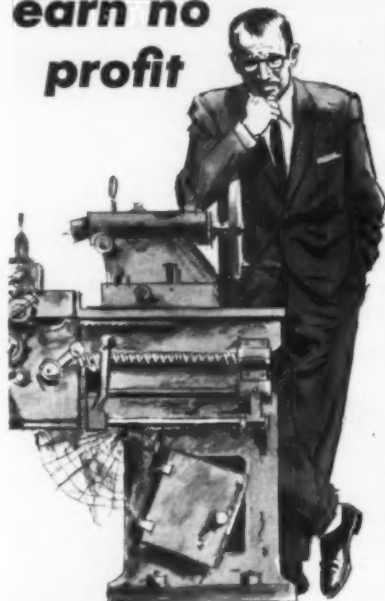
Lockheed has two commercial transports—the Electra Turboprop (152 orders by last December), and the small executive Jetstar (50 tentative orders). It has the Polaris IRBM, is program manager of the second stage and capsule of the Discoverer satellite. Missiles and space projects made up 31% of 1958's \$963-million sales.



NORTH AMERICAN AVIATION, INC.

North American Aviation, Inc., is low in current aircraft production, but well fixed for the future. It has contracts for both the Mach 3 bomber, the B-70, and the Mach 3 fighter, the F-108; and is building a trainer and attack plane for the Navy. It built the X-15 research aircraft. In missiles, it's developing the

"Beatnik" machines earn no profit



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long-range, air-to-surface Hound Dog, to be carried under bombers. Its new projects will carry it into many diverse fields.

Last year's sales were \$904-million—33% in non-airframe divisions.



Martin Co. has a variety of missiles in production for all three services. Its Titan ICBM got a \$384-million contract in January, is slated for \$192-million more in the new budget. It's developing the solid-propellant Pershing for the army. Current aircraft projects are few; but it's building an antisubmarine patrol plane for the Navy (and France). It gave up on commercial transports. Sales rose from \$23-million in 1947 to \$483-million in 1958.

Martin is backing up its bets on the future with a wholly owned subsidiary, RIAS, Inc., formed in 1955 to conduct research in basic science. Now a division, RIAS is staffed with a selected group of scientists who create and conduct their own programs.

MCDONNELL AIRCRAFT CORPORATION

McDonnell Aircraft Corp.'s primary business is building fighter aircraft for Navy and Air Force. In January, it won the contract for a Mach 2 all-weather Navy fighter. It was late getting into missiles, has only two tiny contracts. But it won the award for the Mercury Space Capsule, to carry the first man into space. It has built a multimillion-dollar "engineering campus" at Lambert Field, St. Louis. Sales were \$10-million in 1947, \$442-million last year.

CHANCE Vought AIRCRAFT

Chance Vought Aircraft, Inc., jolted by last December's cancellation of the Regulus missile and F8U-3 fighter, announced it is steering away from dependence on two or three contracts, and seeking commercial diversification. But it's still producing two Navy fighters and a photo reconnaissance plane, and is a subcontractor on the tail section of the B-70 bomber.

Chance Vought was spun off from United Aircraft Corp. in 1954. Its 1958 sales were \$333-million.



Northrop Corp. changed its name from Northrop Aircraft, Inc., only this year to suit its new condition; 64% of its backlog, at last tally, was in missiles and electronics. In aircraft, it's betting on lightweight, low-cost, supersonic fighters.

The contract on its subsonic, long-range missile, the Snark, will probably run out in December. It's expanding in electronics, and has bought Page Communications Engineers, Inc. Sales in the fiscal year ended last July were \$256-million.



Grumman Aircraft Engineering Corp. has a well-rounded group of aircraft contracts. Historically it has been a builder of Navy fighters and of amphibious craft for the Navy and commercial operators. Now it has taken on the Army and Air Force, too. It has little missile business. In the commercial field, it has orders for 40 Gulfstream turboprop business planes. Grumman licenses production of some planes abroad, sells others itself. Its 1958 sales were \$225-million.



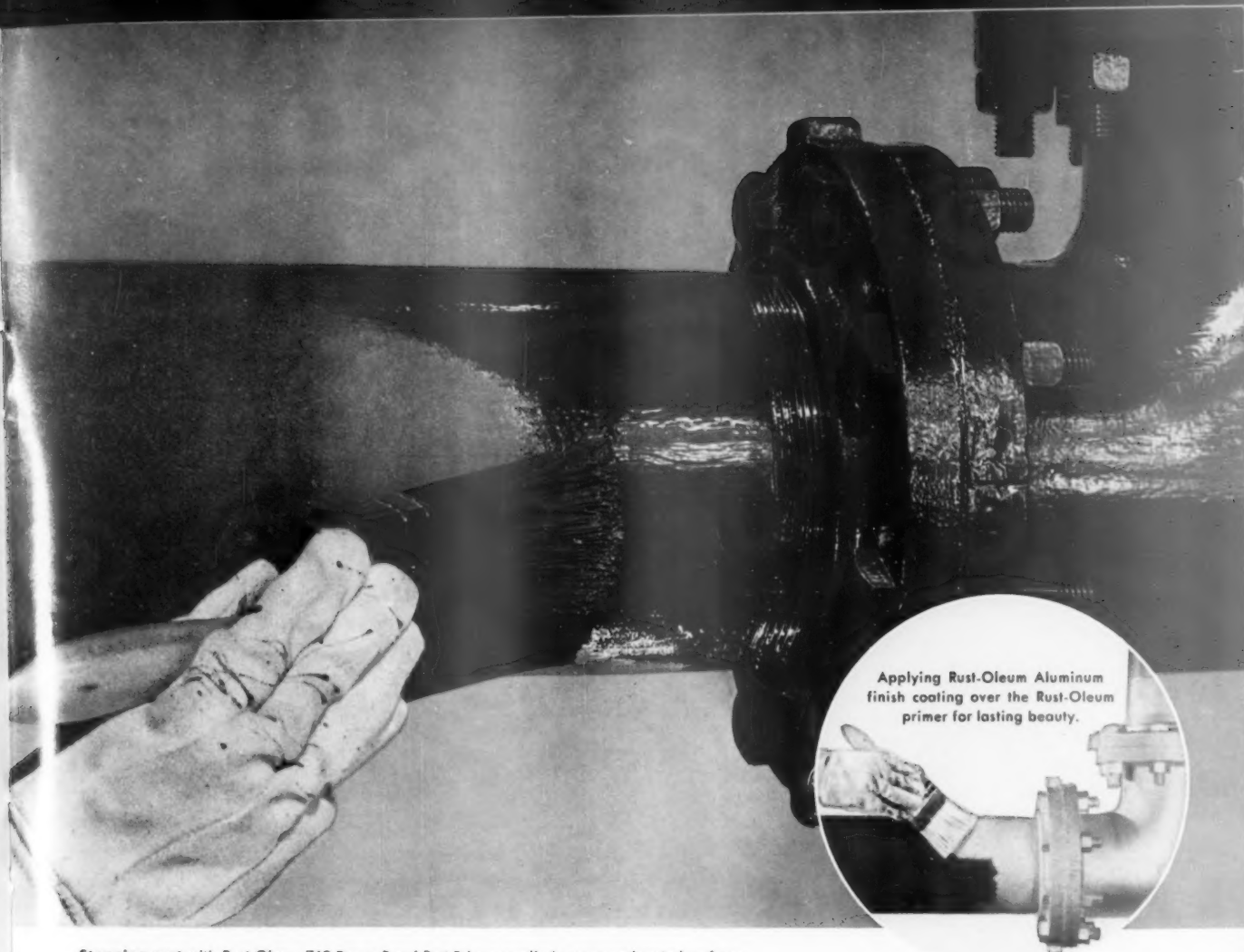
Republic Aviation Corp. has only one significant military production contract, for the Air Force F-105 Thunderchief fighter-bomber, but the backlog on that is probably near \$300-million. It hopes to sell this abroad, to replace the 3,000 F-84s it sold to NATO countries. Republic is spending \$35-million on a space research program, including a \$14-million lab. Sales rose from \$38-million in 1947 to a peak of \$547-million in 1955, then slid back to \$208-million last year.



Bell Aircraft Corp. now builds principally helicopters for Navy, Army, and commercial operators, is developing vertical take-off and convertiplanes. Its principal missile, the Rascal, was canceled in December. It's teamed with Martin in the competition to build Dyna-Soar. Bell has gone into electronics and rocket engines, has a number of subsidiaries making commercial products such as abrasives, valves, and molded glass fiber products. Sales in 1958 were \$182-million.



Fairchild Engine & Airplane Corp. had a bad setback in December when its Goose missile and J-83 light jet engine contracts were canceled. This meant \$50-million lost business for 1959, but Fairchild hopes to make part of it up. It has 80% of its business in military work, and 25% of this in missiles. Commercial projects, besides its F-27 turboprop, include a high flotation tire for landing on rough terrain, and an automatic rifle. Sales in 1958 were \$148-million. **END**



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NEW PRODUCTS

1930s' Autogiro Comes Back

If someone yanked a 25-year-old Cord automobile out of an antique car museum, rebuilt it, and started to sell it as a going product—the automobile world would think he was crazy.

But over in the aviation field, Kellett Aircraft Corp., of Willow Grove, Pa., is doing just about that. Kellett has retrieved a 1934 autogiro from a collectors barn, rebuilt it, and is offering it and more like it with hardly a change from the hybrid predecessor of the helicopter that was such a big crowd pleaser at air shows in the 1930s. Even the price is the same.

The reborn autogiro has already rung up two sales—one for crop dusting, one for use by a land developer. And Kellett hopes to sell plenty more.

• **Rooftop Deliveries**—In the first of its two lives, the autogiro reached its peak in 1939 when the main post office in Philadelphia used it for rooftop mail deliveries, toting some 77,500 lb. of mail in 3,000 flights. In all, some 25 of the craft were sold, mostly for crop dusting and border patrol work.

Then came World War II and the rapid maturing of the true helicopter. Onto the shelf went the autogiro—a sort of hybrid plane and helicopter.

Kellett was not convinced it should stay there. The company admits that the autogiro was too advanced for its time. But now, Kellett believes the advantage of quick rising aircraft is well demonstrated, and there should be a nice market for agricultural and industrial work.

So, Kellett hauled a 25-year-old model out of the museum-barn of an aircraft collector near Pittsburgh. This antique was completely rebuilt, but with only one important design change: The trim settings of the tail surfaces were changed to improve its flight characteristics.

• **Same Price**—Even the autogiro's pre-war price was unchanged. It cost \$27,500 then and \$27,500 now. (A comparable helicopter costs \$45,000, a conventional plane \$18,000.) Improved tools and production knowhow canceled out the 33% rise in materials cost during the period. In the craft being built now, use of the newer structural materials allows some increase in the speed and payload.

Kellett isn't shooting at the moon; before it gets too involved in expensive tooling and production facilities, it wants to see how many takers it can find.

Although the Kellett autogiro looks more like a helicopter than an airplane, it is more closely related to the fixed wing in its aerodynamics. The autogiro



REBUILT MODEL of a 25-year-old autogiro was put back in the sky by Kellett Aircraft to prove the craft's usefulness for crop dusting and a variety of industrial tasks.



COMMODIOUS TRANSPORT for executives gives its five or six passengers enough room to stand up in the cabin. The plane is being offered for sale by Trecker Aircraft Corp.

is powered by a conventional airplane propeller, but gets its lift from an overhead rotor that whirls freely in the airstream. (A helicopter's blades are power-driven and provide both lift and forward motion.)

• **What It Does**—The autogiro's capabilities are a cross between the fixed-wing aircraft and the helicopter. In flight, it resembles a light airplane in controls and maneuver. Top speed is 125 mph. On take-off and landings, it's more like a helicopter—it can get into the air in 200 ft. or less. Like a helicopter, the free-wheeling rotor acts as a parachute if the engine conks out, allowing a safe vertical forced landing.

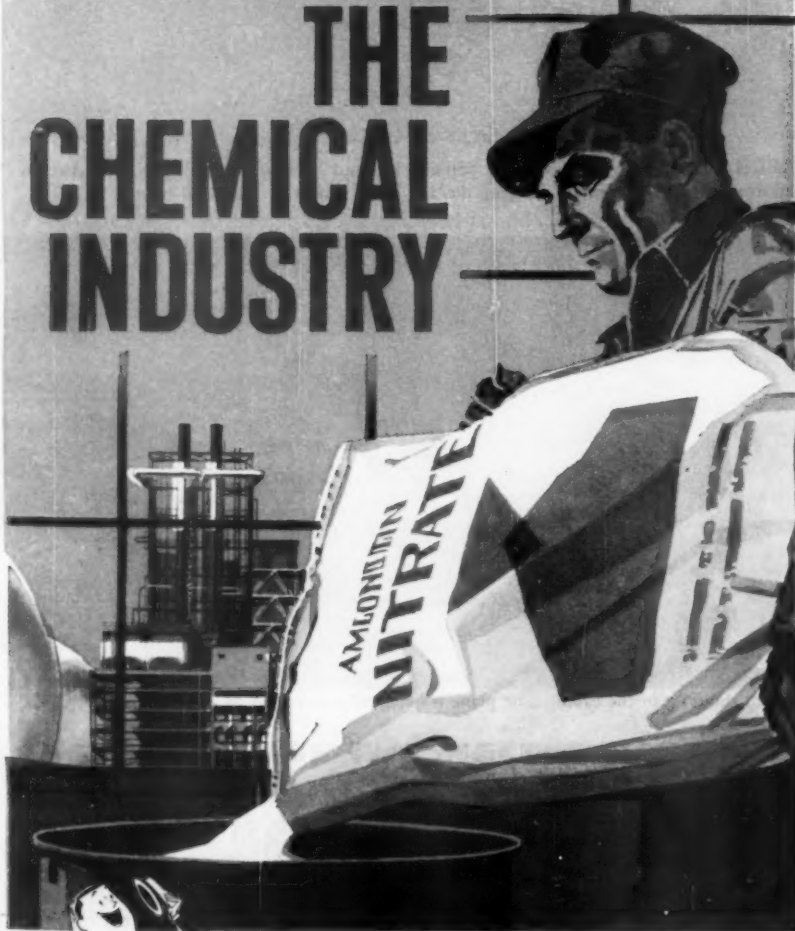
Although the autogiro cannot hover

like a helicopter, it can fly as slow as 22 mph. Because it has no complex mechanism to drive the rotor, its maintenance costs are lower than a chopper's.

Kellett decided to go back into the autogiro business as the first move in a diversification program. Since 1929, the company has been in the rotary wing business. After the war, it centered its interest on helicopters, mostly doing design and engineering work and supplying components on subcontract.

For its revitalized autogiro, Kellett feels the main market will be crop dusting, but it also believes the craft can be used for power line and pipeline inspection and repair, oil and mineral

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"... Mooney Aircraft now is developing a twin-engine version of its inexpensive low-winged monoplane ..."

STORY starts on p. 99

surveys, forest fire patrol and seeding, and fence and herd checking.

• **New Transport**—Another new airplane, whose pusher-type engines give it a resemblance to vintage aircraft, is Trecker Aircraft Corp.'s spacious six-to-eight passenger plane being built in collaboration with Italy's Piaggio & Co. The Trecker 166 will cruise at 200 mph. and has a range of 1,200 mi. The price tag is \$104,000 without electronic gear or interior furnishings.

Trecker's sales pitch for its new executive transport centers on its commodious cabin and the quietness of its rearward-mounted engines. The cabin provides standup room for its passengers.

Piaggio engineered the plane and is building its frame. The final assembly and installation of the engines, instruments, and all the electrical and mechanical components are being handled by Trecker Aircraft, a subsidiary of Kearney & Trecker, the Milwaukee machine tool builder.

In 1954, in its only other airplane venture, Trecker collaborated with Piaggio on a twin-engine five-passenger amphibian now being called the Royal Gull. This venture, strictly the idea of Kearney & Trecker's aviation buff president, Francis J. Trecker, has been less than successful even though the plane is the only amphibian being offered in this country. The company has sold only 21, at prices ranging from \$75,000 to \$90,000, with most of them going to offshore oil companies.

• **In The Works**—In the small plane field, several other new aircraft are in the developmental or planning stage.

Mooney Aircraft, whose inexpensive low-winged monoplane has drawn many favorable notices within the aviation industry, now is developing a twin-engined version. Two 150-mph. Lycoming engines will give it a speed of 200 mph. Its proposed selling price is an attractive \$30,000.

And William P. Lear, the wide-flying aircraft electronics' manufacturer, has dreamed up a twin-engined craft that looks and flies like a single-engined light plane, but actually is pushed along by a twin-engine power package. The idea is to give a flying executive a plane with the ease of handling of a single-engined craft but the additional safety of a second engine to fall back on. Lear, who is promoting the craft as a personal project, flew to Japan last week to negotiate for its design. **END**



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Swedish concern, at least 671 years old, pioneers in oxygen steel furnace and pulping techniques in U.S., Canada.

On June 16, 1288, one Nicolaus Christineson disposed of a one-eighth share of a copper mining concern in central Sweden, and the transaction was recorded in a document now in Sweden's National Archives.

This is the oldest known reference to the mining company. It by no means dates the very beginning of the enterprise, but it satisfies most authorities that Stora Kopparbergs Bergslags, AB, direct descendant of the original mine operators, is the world's oldest corporation.

As a continuing business, Stora has outlived every national government established during its time. On its books are records of such events as the payment of ransom to Danish invaders to recover a Swedish port, Stora's world monopoly in copper and designation of the metal as the coin of the realm, in order to protect its price, and sales to many famous monarchs, includ-

ing Louis XIV of France, who roofed the palace at Versailles with Stora's copper.

• **Conservative, But—**Like most 671-year-old institutions, Stora has its conservative side, at least by U.S. standards.

Its copper mine yielded its last ore a century ago, but the directors would never think of changing the company name, which means "great copper mountain mine." Nor does the company even post its name on its headquarters buildings in Falun, an industrial city of 17,000 about 100 mi. northeast of Stockholm. The company built nearly the whole town and still owns many of its buildings, so it sees no need to advertise a known fact.

Stora's traditionalism and stiff-colored public demeanor, however, mask a lively and aggressive growth policy. Since copper petered out, the company has been active in iron and steel, paper, and chemicals. It expects to be even more active soon, despite the weight of its 671 years.

• **Foothold in America—**For the first time in its history, Stora is establishing a couple of strong beachheads on this side of the Atlantic:

• **Dravo Corp.,** Pittsburgh manufacturer, has signed an agreement to make and sell equipment for Stora's Kaldo oxygen steep process, a promising technique that uses a radical type of rotating furnace (picture, right).

• **Stora is negotiating** for 2-million acres of forest in Nova Scotia, with plans to build a \$40-million pulp mill there, to supplement its 1-million acres of forests in Sweden (picture, above).

• **Needs New World—**Stora has been growing fast: its annual sales to a record level of around \$120-million, after-tax profits to about \$7-million a year, investment in plant modernization and in research and development to nearly \$20-million a year since the war. Earnings have largely been plowed back into the program of getting more yield from mines and forests.

Now, for the first time, the company is within sight of full exploitation of its resources. It can no longer expand its real estate in Sweden, because of government control of land use. Its effort to improve utilization of the resources it already owns can go only so far.

"We find ourselves overflowing with technology," muses Hakan Abenius, Stora's managing director.

The likeliest place to put this plethora of technical knowhow to work is overseas, but Stora's technology isn't the easiest kind to export. It is related to basic materials—newsprint, paper pulp, lumber, steel, and heavy chemicals—though Stora also produces about 1.5-billion kwh. of electricity each year at its hydro plants and several million dollars' worth of food on its farms.

Stora's principal products require a heavy capital investment—you can't set up a small steel mill or a small pulp mill in the way other Swedish companies such as Electrolux, SKF, and De Laval build small factories in other countries, to grow as sales grow. Yet the Swedish government does not look with favor on any plan to export large amounts of capital to finance foreign operations.

I. Oxygen Furnace

One way Stora can enlarge revenue from overseas with the least trouble is to license its processes in return for fees and royalties. That's what it has done in its deal with Dravo Corp. for the Kaldo oxygen furnace.

Stora is one of the few Swedish companies that produce ordinary steel in addition to the high-grade alloys on which Sweden's metallurgical reputation rests. Its mill at Domnarfvet uses a high-phosphorus ore that yields pig iron which requires processing in basic Bessemer or Thomas converters.

In searching for a less costly and more efficient way of making high-quality melts in this process, Stora's metallurgists turned several years ago to oxygen techniques. The result is the Kaldo furnace.

Like a Bessemer converter, this furnace is bottle-shaped and, like a Bessemer, it tilts. In addition to tilting, however, it rotates while oxygen is blown into the open end. A lance directs the oxygen against the surface of the molten metal as the furnace spins. • **Quality, Cheaply**—Stora says operators are able to keep exceptionally close control of temperatures, slag composition, and quality of steel.

"We believe," says T. Olaf Dormsjo, manager of the Domnarfvet plant, "that the oxygen steel processes mean the end of open hearth furnace construction. We know the Kaldo process is

much more flexible and efficient, and it can be installed for a lot less cost per annual ton of production capacity."

Dravo and Stora agree in studies that indicate a cost range of \$8 a ton of capacity, or even less, to a top of \$15 a ton, depending on whether the furnaces are put in existing structures or new ones. This cost range is less than half the cost of new open hearth furnaces able to do a comparable job.

The Kaldo furnaces come in sizes of 30 to 100 tons per melt. That's much smaller than most open hearths, but a Kaldo furnace pours a melt every 90 min. According to Dormsjo, a bank of three Kaldo furnaces—two always in operation while the other was down for maintenance, could easily turn out 2-million tons of steel a year. The furnace is also attractive to companies that produce small melts on special order.

Stora's metallurgists have developed several other processes that intrigue U.S. steelmen. Among them are a sponge iron process that yields high-quality iron by direct reduction from ore and a method of turning powdered iron directly into a ductile steel sheet

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by heat-treating and rolling it. This process produces steel without even melting the iron.

II. Canadian Pulpwood

Long before its ancient copper mine yielded the last ore, Stora acquired iron mines and prepared to go into the steel business. In much the same way, Stora shifted course in the forest products industry.

Originally, Stora put together its million acres of forest to support its copper mining and smelting operations. Ore was at that time broken from the mine face by the action of wood fires; wood was also the only source of fuel for the copper smelting. When these uses were outdated, the forests were worked for lumber and, since 1900, paper and pulp. Today, Stora produces about one-third of Sweden's newsprint.

• **Advanced Methods**—Stora operates mills that use every known pulping method, and it has made special progress in economical recovery of waste. At the Stora pulp mills at Skutskar, near the mouth of the Dal River, for example, no waste liquors are dumped—they are concentrated and then burned like fuel oil to run the mills. The chemicals they contain are recovered.

The Skutskar sulphite mill uses a double cooking technique in processing pine, whose resin content usually clogs up such a mill. This process works well with the spruce and fir of Nova Scotia forests, Stora found when it shipped several loads of pulpwood to Sweden for processing on a commercial scale.

• **Intricate Deal**—Right now, Stora is working out complex financial arrangements for its Nova Scotia project.

Two years ago, Stora set up a venture corporation, Nova Scotia Pulp Co., to survey forests and negotiate for leases of land. Stora holds options to buy all Nova Scotia Pulp stock, which is now held personally by Karl Clauson, president of Stora Kopparberg Corp., the company's New York sales subsidiary. Nova Scotia Pulp, meanwhile, has leased 2-million acres of forest in the province with a promise to build a 350-ton-a-day sulphite mill.

To take over full equity interest in the venture, the parent company plans to raise part of the needed funds by issuing debentures in Canada and the U.S. It will be several years before the plant can be completed, but Stora is in no particular rush—its marketing plans are based on projections of worldwide demand in the mid-1960s.

If the pulp mill pays off, Stora will have a good source of dollars to finance moves into other fields on this side of the Atlantic, such as steel and chemicals. **END**



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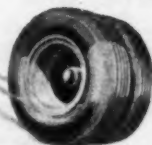
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Dutch Ship Breaks All Traditions: It Won't Have Stacks—Fake or Real

The chimneys being lowered into place on the new SS Rotterdam (picture) are the only exhaust outlets it will have. And, in a real departure from conventional ship design, the new Holland-American flag-ship won't have fake smokestacks. Other ships have used the idea of aft-placed chimneys, but have kept dummy stacks to provide traditional lines. The new outlets are intended to keep decks comparatively free of soot and provide extra outdoor space for passengers.



The 38,000-ton ship is now undergoing final fitting at Rotterdam. It will be 748 ft. long and 94 ft. wide. The twin-exhaust unit, made of aluminum with a steel inner shaft, weighs 25 tons and is 53 ft. high.

The Rotterdam will make her maiden voyage from Rotterdam to New York in September.

• • •

New One-Step Process Reduces Iron Ore to Steel in One Hour

Making steel from iron ore in one step may be something more than a pipe dream if a new direct-reduction process pans out. Invented by Frank Madrigal and developed by International Ore Processing Co., Los Angeles, it mixes iron ore with a special alloying compound in a furnace to produce a finished steel ingot in an hour or less.

Previous direct-reduction processes take at least two steps to produce a semi-steel (BW—Sep. 27 '58, p172). Many are in large-scale operation, however, while the Madrigal process is being used on a very limited basis.

Aero Alloys, Inc., Anaheim, Calif., is using the Madrigal process under franchise and is making 500 lb. of ingot an hour in an eight-hour shift. It makes up to 500 lb. in one ingot. The products are special alloys; one is reported to be high in nickel and chrome—presumably of special interest to the aircraft and missile industries. Aero Alloys says they have applications in the chemical and petroleum industries, too, but the process and its uses are deliberately being shrouded in secrecy.

What is known about tests of the Madrigal process indicates a steel of high tensile strength but good ductility, and good resistance to high temperatures, corrosion, and oxidation. The process apparently recovers from 80% to 98% of the available iron in an ore, with-

out use of scrap and coke, at a cost of \$30 to \$35 a ton. (That would be a saving of about \$20 over conventional processes.) You need 600 lb. of alloy powder per ton of ore and can reportedly use induction, gas, or electric furnaces.

Several steelmen are keeping an eye out for further results—especially tests of the process's chemistry and metallurgy, and the effects of large-batch production.

• • •

Bigger Gas Turbines May Provide Needed Boost for Cargo 'Copters

Bigger gas turbines will soon be available to give giant cargo and flying crane helicopters a much needed boost to get them off the drawing boards and into the air.

General Electric Co.'s new 2,570-hp. T-64, unveiled last week, is twice the size of any other helicopter gas turbine now available. And, at 854 lb., the T-64 is only one third the weight of a comparable piston engine. This is pure saving, since gas turbine refinements have made fuel consumption of the two types of engines roughly equivalent.

Competitive with the T-64 is the new Lycoming T-55, which already has passed its 50-hr. flight test. Developed by the Lycoming Div. of Avco Mfg. Corp., the new engine is designed to deliver 1,600 hp. But newer versions now being designed will up this to 2,000 hp.

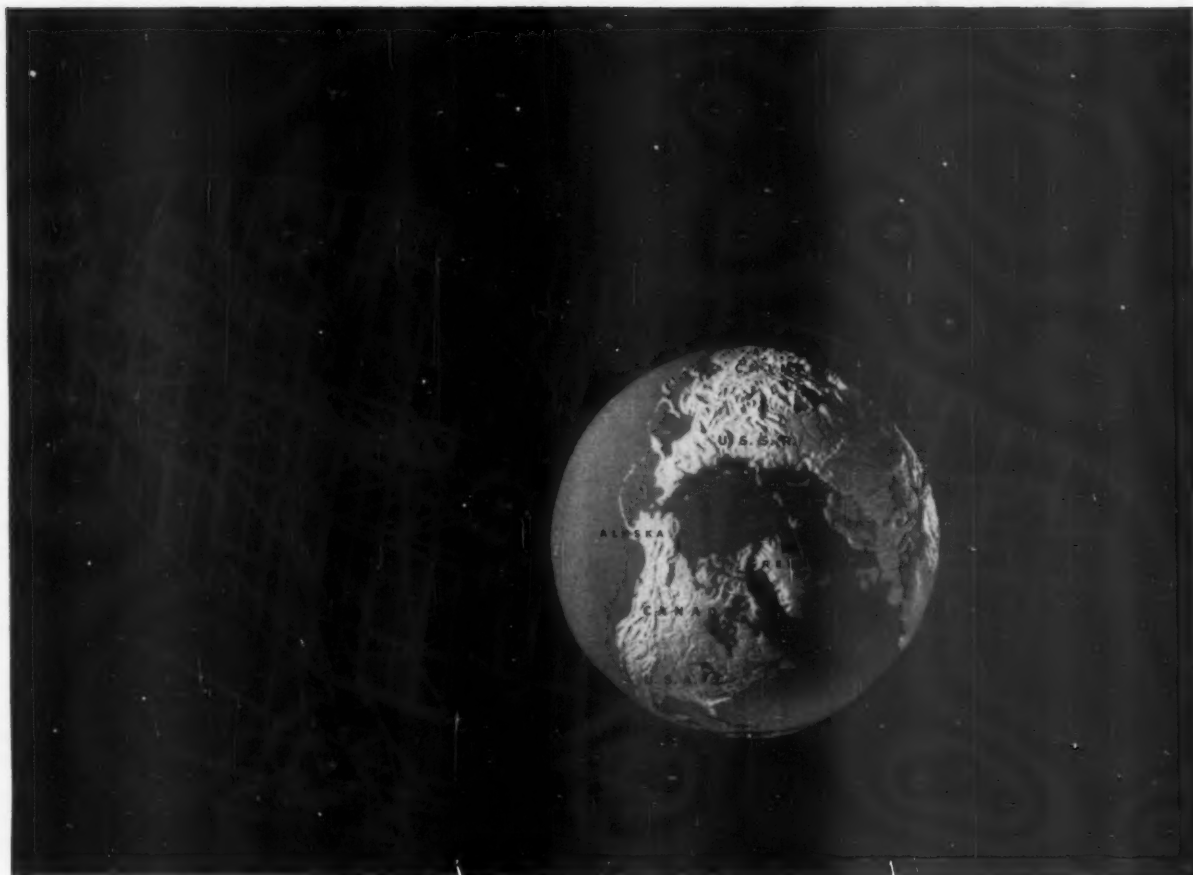
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Production Briefs

Nuclear technology is making it easier to maintain proper moisture content in sand molds for foundries. General Motors' Central Foundry Div. plant in Danville, Ill., is using plutonium 239 mixed with beryllium powder and sealed in a stainless steel capsule. Fast-moving neutrons emitted by the plutonium collide with hydrogen nuclei in water atoms in the sand, producing slower-moving neutrons that can be counted electronically. The number of slow neutrons is directly proportional to the sand's moisture content.

Goodyear Tire & Rubber Co. has a new continuous process to build large-diameter hose without splices, in lengths limited only by the size of transport facilities. The hose liner is wrapped and sealed on a mandrel, wrapped with reinforcing cord, bagged and cured in a cycle resembling the process used in making automobile tires. Previously no hose was produced in unspliced lengths over 100 ft. with an inside diameter greater than 1.5 in., according to Goodyear.

Fansteel Metallurgical Corp. will build a new plant to produce over 30,000 silicon power rectifiers a day, high volume for one kind of solid state device. Much of the plant's capacity will be devoted to a new silicon rectifier for car engines (now produced at 5,000 a day). This engine system uses an alternating current source instead of the conventional direct generator, giving more power and ability to charge the battery when idling; the rectifiers convert the alternator's a.c. output to d.c.



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miles ahead and helps pilots avoid them. A new Bendix Doppler radar navigation system, contained entirely within the plane and not dependent on any external beams or signals, gives pilots precise information on ground speed and position. Surveillance radar helps control airport traffic, and G. C. A. (Ground Controlled Approach) radar is used to "talk pilots down" for landings in bad weather.

In addition to military plane radar, we make radar proximity fuses which trigger the warheads of some of our missiles, and radar beacons which help identify the planes or missiles in which they are located.

A new radar system has just been developed for use on military helicopters. This electronic "eye", which can also be installed on liaison and cargo aircraft, is designed for night and bad weather operations and for navigating between mountains and in canyons. It shows the distance to any terrain obstacle and can also be used for ground mapping.

In the marine field, vessels of all types from ocean liners to 35-foot family cruisers use economical Bendix Radar. Leading TV stations, too, now use Bendix Radar to show their audiences the "weather" by actually picturing the size, intensity and exact positions of storm activity.

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Traffic Jams Overwhelm Seaway

Welland Canal bottleneck plus inadequate port facilities are causing delays, and point up limitations of new waterway.

In the three weeks since the St. Lawrence Seaway opened, permitting ocean-going vessels to steam into the Middle West, the sailing has been far from smooth. A half-dozen ships have been damaged, and several dozen others have been delayed.

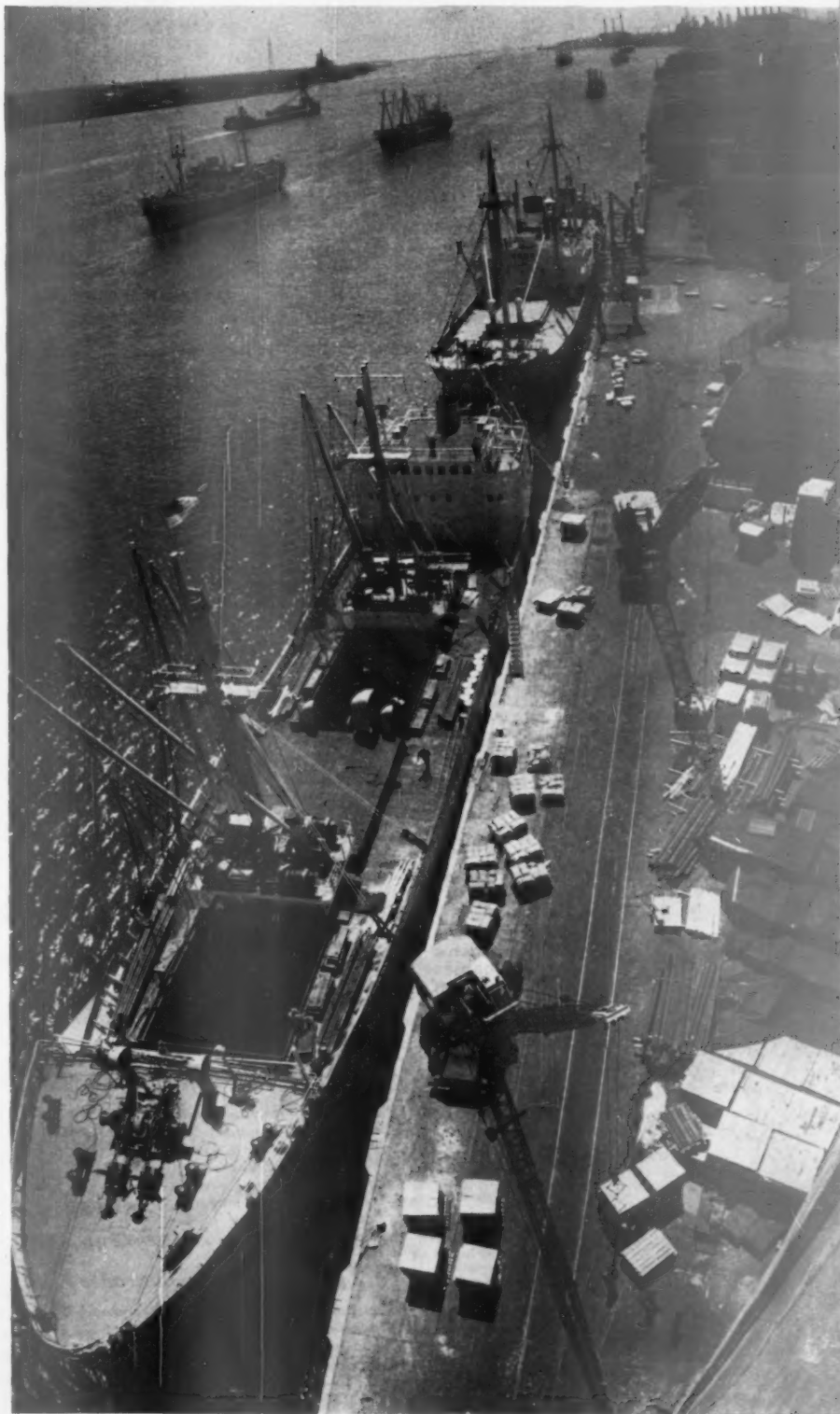
The damages were more irritating than serious, but the delays have been costly. A late thaw caused 60 ships to pile up at Montreal in five days, slowing passage up the St. Lawrence River until traffic thinned out. At the Lake Ontario entrance to Canada's Welland Ship Canal, as many as 48 ships stacked up again while waiting on the single locks. In Detroit, (picture), where harbor berthing space was inadequate, ships had to wait in the Detroit River for their turn.

• **Costly Delays**—Eventually the Seaway will provide a competitive means of transportation between the Atlantic and the interior, but its limitations—particularly the winter freeze and the Welland's single locks—were soon obvious. Since delays boost ship operating costs by \$750 to \$1,500 a day and slow down movement of goods, they could persuade both shipping lines and shippers to go back to using Atlantic ports.

The Seaway's users probably will forgive its early troubles because of a unique combination of circumstances. The start of every season on the St. Lawrence attracts a number of ships, waiting downriver for the thaw. This season, the thaw came late. Besides this is no ordinary season. It's the Seaway's opening, attracting even more ships to the new waterway with its deeper channels and fewer locks built between Montreal and Lake Erie by Canada and the U. S.

• **Errors and Accidents**—Along with the novelty and competitive enthusiasm, the Seaway has been the victim of human error (a Danish tanker found its bridge 6 ft. too wide for the Welland's locks, had to be backed out to have the bridge shortened), nature (strong winds, turbulent currents), and unrelated mechanical failures (the motor of a lift bridge across the St. Lawrence burned out, temporarily stopping traffic.)

The elements had a hand in the two most serious accidents, which took place in Canadian river locks. Grace Line's 15,000-ton Santa Regina dented its



BOTTLENECKS form in Detroit River, where terminals can handle only four ocean ships at a time. Other craft queue up for passage through single locks of Welland Canal.



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steel plates in the St. Lambert lock outside Montreal when a strong wind carried it into the side of the locks. The 17,000-ton Greek freighter Panagiotis bent a propeller and smashed its navigation lights in the Iroquois lock upriver when it was caught in a strong current and pulled against the wall.

Both accidents illustrate the new nature of the St. Lawrence-Great Lakes waterway. Unlike lakera and canals, large ocean ships are less maneuverable at slow speeds. With their high hulls, they are vulnerable to winds that blow harmlessly across the decks of other vessels. Shipping people note that damage might be less if the Canadians had equipped their locks with bumpers and pilings such as the U.S.' Eisenhower and Snell locks have. But Canada, which is paying 72% of the Seaway's \$471-million cost, skimped on such ship cushions—so that vessels crash directly into concrete.

• **Big Jam**—Beyond the St. Lawrence locks, the ships moved cautiously. Even the experienced river pilots taken aboard to guide them were unsure of themselves in the newly cut channels.

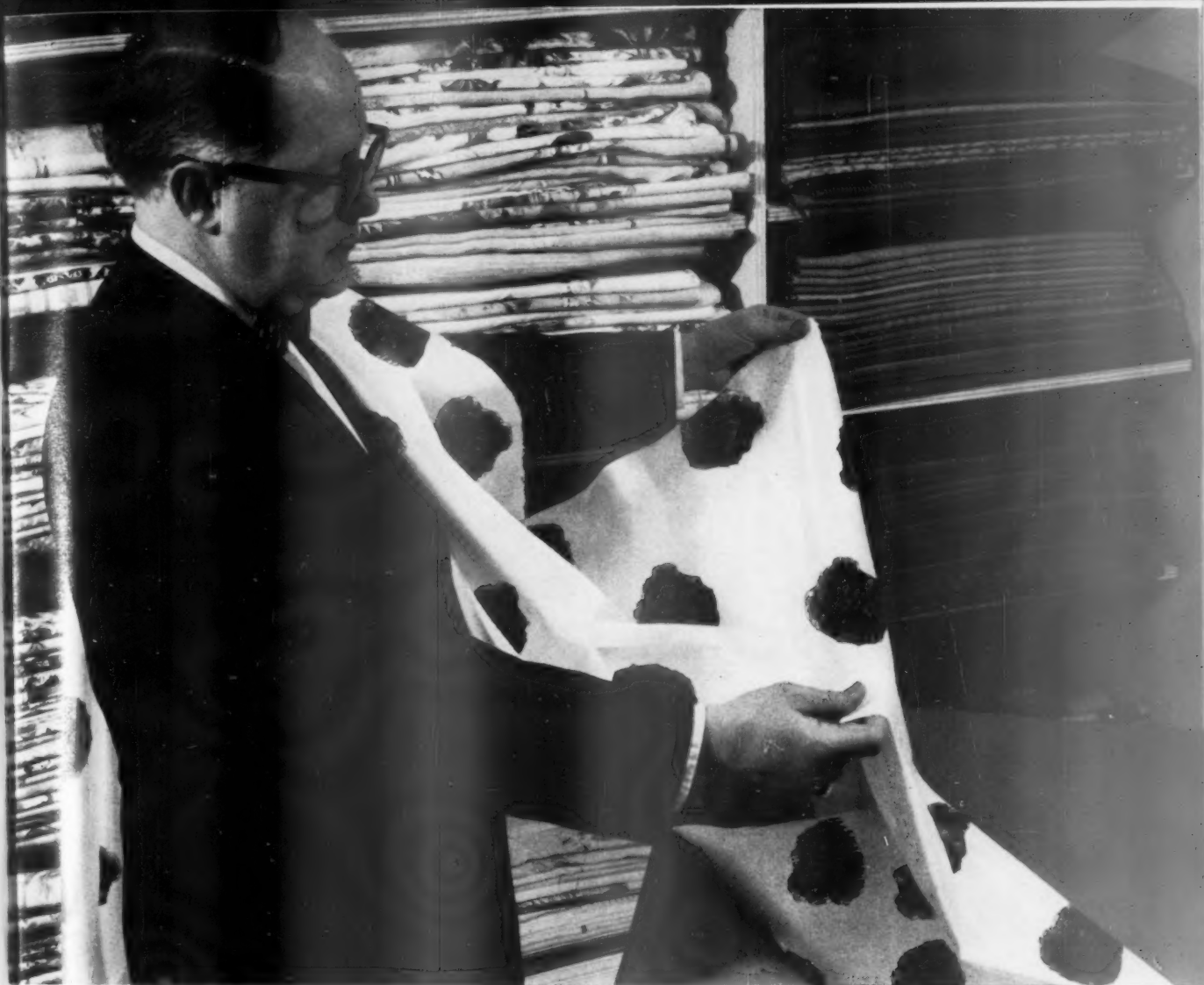
But the real jam developed at the western end of Lake Ontario, where ships enter the 27.6-mile Welland Canal.

For years, the Welland has been an off-and-on bottleneck for a smaller amount of traffic that had to transit its eight locks to bypass Niagara Falls. Its five single locks generally were regarded as the most severe restriction on the Seaway's potential. Critics held that they could not handle the 40-million tons estimated for this season (compared to 25-million for the St. Lawrence locks). But Canada, which at one time threatened to build an all-Canadian Seaway, didn't want to spend \$100-million to twin the locks. Of its Seaway expenditures, it diverted only \$29-million to the Welland—just enough to deepen channels between the locks.

The limitations of the canal were demonstrated from the start. With an hour or more required for each vessel to go through one lock, the Welland was up against it: In addition to the 20-odd ships that the St. Lawrence locks were feeding it every day, it had to absorb the traffic of lake boats that don't ply the St. Lawrence.

• **Temper Flare**—The Welland Canal delays were enough to provoke tempers among its users, and set off owners of big ships against owners of small ones. Traditional lake users were dismayed to compete with ocean ships for passage. Upper Lakes Shipping Ltd., a Canadian company, asked Ottawa to prohibit foreign vessels unless they were properly equipped for "safe and efficient transit."

Steel companies in Hamilton, Ont., which obtain iron ore from the Mesabi



Coal sets pattern for low-cost steam

Fabric finisher burns coal for economy and availability

Modernity is the keynote of the new plant of Carlisle Finishing Co., a division of Cone Mills Corporation, Carlisle, S. C. Advanced planning and up-to-date techniques are evident throughout the company's entire operation. The power plant, too, reflects this thinking... *coal* is used to generate the steam required for heating and processing. Chosen for its economy and availability, coal is burned and handled automatically by the latest equipment for peak efficiency. Also, the interior of this plant—designed by the consulting firm of J. E. Sirrine Co., Greenville, S. C.—has been decorated in cheerful colors to match the cleanliness of operation.

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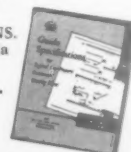
more steam per dollar, while automatic operation trims labor costs and eliminates smoke problems. What's more, tremendous coal reserves and mechanized mining procedures assure you a constantly plentiful supply of coal at stable prices.

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range, fretted that they might not be able to bring down enough ore before the likely U.S. steel strike that would close the mines. On the other hand, foreign shipping people complained that the canal crews were inefficient. Some crew members, caught in the middle, quit their jobs in disgust.

In Ottawa, Transport Minister George Hees blamed the logjam on "temporary overpopularity" and contended that it would thin out. But his words could not quiet speculation that Canada may be forced to twin the Welland locks ahead of schedule. Even if the Lake Ontario pile-up does thin out, another jam is expected at the Lake Erie entrance soon when the first ships begin to return to the sea.

• **Port Incidents**—In their ports of call, the ships found little to beef about with the notable exception of Detroit.

At one time, nine ships lay at anchor in the Detroit River because the two private terminals can handle only four ocean ships at a time. Wayne County voters twice had rejected proposed issues of full faith and credit bonds to finance public harbor facilities.

Now a move is under way to have the city sell revenue bonds to build facilities and lease them to the county. At last word, that seemed to sit well with all concerned.

Once tied up in port, ships occasionally found it difficult to load or unload—partly because the harbor facilities have been oriented to lakers. In Port Arthur, Ont., the Greek freighter Panagiotis found dockside elevator spouts too low to pour grain into her holds. Crews had to pump water into the ballast tanks to weigh her down. In Buffalo, where a freighter had a hard time unloading some steel, shipping men complained that foreign shipping lines and shippers don't seem to know enough about the type of handling equipment available at their destination.

• **Remedies**—Over the long term, much dredging remains to be done in channels above Lake Erie and in lake ports to make the entire St. Lawrence-Lakes system truly a 27-ft. waterway. Because the Administration and Congress are providing funds more slowly than expected for the \$146-million channel improvement work up the lakes, deepening may not be completed until 1963 or 1964—instead of 1962 as scheduled. Washington observers predict federal funds will trickle out so slowly that a decade will be required to dredge the harbors. Ironically, only Detroit harbor with its Detroit River is down to 27 ft. now. In other ports, where depth varies from 20 ft. to 24 ft., ships must go in partially loaded. For 15 projects being studied by the Army Engineers, \$64-million in federal funds is being recommended on top of local money. **END**

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Called the PM-2A (portable medium power reactor), the ALCO plant has recently been purchased by the U.S. Army for use in a remote, frigid location. One core-loading—40 lb of uranium—will provide for two years' operation and replace 2.6 million gallons of fuel oil.

This will be the third ALCO nuclear-power plant. At Fort Belvoir, Va., the world's first nuclear station for power generation has been in operation since early 1957. A second reactor system is now being built by ALCO for Army duty in Alaska.

In addition to complete systems, ALCO has pioneered the design and fabrication of a wide range of nuclear components. Nine out of 10 major U.S. nuclear plants incorporate ALCO components.

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Congress Heads TVA Bond Bill

Toward an Almost Certain Veto

Disregarding the threat of a Presidential veto, the House last week passed a controversial bill intended to make the Tennessee Valley Authority financially independent for expansion of power-generating facilities.

The essence of the bill is its provision that TVA, to finance its growth, can issue its own revenue bonds. Such bonds—of which no more than \$750-million could be outstanding at any time—would not become part of the public debt, nor would they be federally guaranteed.

Two years ago, the Senate passed comparable legislation. This year, easy Senate passage is a foregone conclusion. In fact, it is probable that Senate managers of the bill will soften a section inserted to help squeeze the bill through the House. This would bar TVA from extending electric power service beyond its present confines.

Republican House members leading the fight on the bill warned that Pres. Eisenhower almost certainly would veto any version that does not allow (1) Budget Bureau review of TVA's construction plans, (2) Treasury Dept. authority to veto bond flotations, and (3) Treasury determination of interest rates on bonds. Amendments were offered on all these points, and each in turn was beaten down by Democrats.

Officials have estimated that TVA would issue revenue bonds up to the \$750-million ceiling within five to seven years, mainly for construction of new steam plants and enlargement of existing steam facilities.

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Air Force Will Use Liquid Hydrogen To Fuel Future Space Research Vehicles

The Air Force revealed this week that it is buying liquid hydrogen to propel the upper stages of some of its newer research vehicles. One of the first rockets to use the liquid hydrogen will be Project Centaur in its second-stage Pratt & Whitney engine. Centaur's announced aim is to hoist a five-ton satellite into an earth-circling orbit using the fuel.

Significance of the announcement lies in the fact that the Air Force (in collaboration with a number of companies working in the field of liquefied gas research) apparently has solved the problem of how to transport liquid hydrogen safely from the plant where it's made to missile fuel tanks. Liquid hydrogen long has been recognized as the "ultimate" chemical fuel. For its weight it produces 40% more thrust than conventional rocket fuels do. However, it's relatively expensive to produce, extremely explosive, and tricky to handle. It must be kept below -420F, only 40 degrees above absolute zero under pressure at all times. So far as military rocket design is concerned, this means that what is gained in thrust by using liquid hydrogen is

almost completely lost in the weight of the cooling and pressurizing equipment needed to go along in the rocket with it.

Air Force producers of liquid hydrogen at the moment are Air Products, Inc. and Stearns-Roger Mfg. Co. Union Carbide's Linde Div. has also signed a contract to supply the National Aeronautics & Space Administration with liquid hydrogen for use in some of its research rocket vehicles during the next five years.

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Budget Restrictions Cancel DAMS, An Anti-Missile System for Bombers

Word leaked out of Washington this week that the Air Force recently canceled the hush-hush "Project DAMS," a multimillion-dollar program for development of an anti-missile system to be carried by bombers and other aircraft.

DAMS was one of the first major weapon system contracts to be awarded by the Air Force on a "team" basis (BW—Feb. 15 '58, p97). Under this concept—which is growing more popular among defense producers—a team of companies with diverse technological talents bands together to bid on and handle one prime weapon system contract.

DAMS was unique in that the contracting team was headed by a small Plainfield, N. J., electronics company—Stavid Engineering, Inc.—and included such giants as Olin Mathieson Chemical Corp., Bausch & Lomb Optical Co., and United Shoe Machinery Corp.

Washington sources say the contract was terminated because of Air Force budget restrictions. Stavid was also hit hard in a recent Army economy measure that resulted in cancellation of the Plato anti-missile development project on which the company was an important subcontractor to Sylvania Electric Products, Inc.

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House Committee Proposes to Shrink Stockpile of Strategic Materials

Pressure is being applied in Congress for disposal of part of the government's \$8-billion stockpile of so-called strategic materials.

The House Appropriations Committee approved a bill to deny \$49-million to the Administration to replace perishable items sold under a rotation-of-stock program designed to prevent deterioration and spoilage. These are items such as natural rubber, fibers, castor oil, and feathers and down. It's estimated, for example, that the government sold and replaced about 3,000 tons of natural rubber last year.

The full committee approved the action of its subcommittee on independent offices to cut off replacement funds. The subcommittee charges that \$4.2-billion of the stockpile is in excess of requirements. This was conceded by Franklin Floete, head of General Service Administration.

GSA would like to reduce the stockpile, Floete says, but there's difficulty in finding ways of selling off billions of dollars of materials without seriously upsetting the sensitive markets of the commodities involved.

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All of this material had to be moved into the lake from quarries and borrow pits on the shore. To handle the tremendous tonnage, the contractor, Morrison-Knudsen Co., Inc., used big barges, trucks and rail cars on a 'round the clock seven day week schedule. A total of 65 Euclids — 46 rear-dumps of 22-ton capacity and 18 big bottom-dumps — have helped keep this project ahead of schedule. With

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Balking a Run on U.S. Gold?

● The rumor persists that that's what Allied central bankers and finance ministers agreed to do at last week's international monetary conference in London.

● Skeptics point out that the rumor may well have been planted, that the mere suggestion weakens faith in the U. S. dollar.

● The U. S. stock of gold is at the lowest level since the war, but there hasn't been a real run on it.

Last week in London, bankers from the U. S. and most of Western Europe, gathered for an international monetary conference sponsored by the American Bankers Assn. The sessions they held were closed to the press, but by this week, the world centers of international finance were buzzing with a rumor that the U. S. and its allies had agreed to cooperate to slow down the drain on the U. S. gold stock.

No one was any clearer on how this could be done than on whether an agreement was made at all. But the rumor suggested that foreign central banks, which can buy gold for dollars in New York, will limit their purchases. Without joint action, some experts say, there may be a nervous and massive switch from dollars into gold by foreigners, leading to unwelcome protectionist pressure by the U. S. On the other hand, there's a suspicion in Wall Street and Washington that the rumors are intended to embarrass the U. S. and thus encourage a run on the dollar. Said one Fed official: "The idea that action will be taken to prevent a run would be evidence that we are in a weak position."

It would not be surprising if serious talks were held; over the last few years there's been an increase in the exchange of information among the world's banking men. The International Monetary Fund, for instance, has been holding meetings to warn against disruptive movements in international money transactions.

But such talk is a far cry from actual agreement. Some Europeans, though, particularly those who have been investing in gold stocks, are apt to regard any meeting among U. S. and foreign bankers as a sign of weakening confidence in the dollar. And last week's meeting boasted a blue-ribbon class of officials.

• **Official Lineup**—Most of the delegates at the meeting were private bankers who couldn't be part of any official

agreement, formal or informal. But there were enough delegates who held official positions, with power to make a deal, to make the rumor's truth at least technically possible.

U. S. officials at the conference included Treasury Secy. Robert B. Anderson and William McC. Martin, chairman of the Federal Reserve Board. Among the British delegates were Chancellor of the Exchequer Heathcoat Amory and Cameron Cobbold, governor of the Bank of England. Also in attendance were Wilfrid Baumgartner, governor of the Bank of France, and Per Jacobsson, chairman of the International Monetary Fund.

The presence of these top central bankers and finance ministers suggested that some serious private talks on the international monetary situation took place, whether or not they came to any agreements.

• **Drain on Gold**—Moreover, the meeting was well timed to give backing to the report of an agreement. As the sessions got under way, British newspapers headlined stories of a new drain on the U. S. gold stock. Last year, buying of U. S. gold by foreign countries resulted in a drop of almost \$2.3-billion in the U. S. gold supply. The drain has been much slower this year, but in the past few weeks, there has been a resumption of foreign buying. This brings the U. S. gold stock down to \$20.3-billion, the lowest level it has hit since the war.

There is precedent for an agreement to limit gold buying. In the 1920s, Benjamin Strong, head of the New York Federal Reserve Bank, and Montagu Norman, the domineering head of the Bank of England, had a policy of firm cooperation aimed at maintaining stability in international monetary transactions. In a letter to Norman, Strong wrote that this cooperation was essential "so long as we are right and not afraid of our critics."

During most of that period, Strong agreed that the New York discount rate

should be kept below the London rate, because this would give London an advantage in attracting capital from foreign sources and help the British in restoring the gold standard. They also agreed on when to buy or sell gold to each other.

This kind of gentlemen's agreement among central bankers could not work today. In fact, the main charge leveled against Norman and Strong was that the rules they laid down for admission into their "club," with the credits it provided, interfered with the sovereignty of the nations involved.

Today, the orthodox weapons of central banking are again being relied on to bring about domestic currency stability but, in every case, with the approval of the governments concerned. Thus, no agreement to restrict buying of U. S. gold could be made by central bankers alone.

• **Exaggerated Talk**—So far, there has been nothing resembling a run on the U. S. gold stock. True, the gold supply has been subject to a drain over the last 15 months. But the outflow so far this year is far below last year's drain.

This suggests that talk of lack of confidence in the dollar is being overdone. In fact, Fed officials explain that the current outflow is largely due to special technical factors.

For one thing, Britain and other foreign governments have to accumulate gold to post with the International Monetary Fund, which is getting increased subscriptions of about \$1.5-billion this year. For another, this is the period when the sterling area runs a strong balance of payments surplus; beginning in June, it customarily runs a deficit.

What's more, Russian gold sales have been smaller than usual this year. With demand fairly strong, this has meant an increase in the cost of gold in London, making it cheaper to buy in New York. A foreign central bank could sell gold in London, purchase gold in New York, making a profit on the arbitrage. But it is considered significant that this is not happening on a suspicious scale. As one gold expert points out, "That kind of transaction is just not done between friends."

• **Gold and Dollars**—Perhaps the main reason Europeans are not buying gold with dollars is that they lose the interest payments that short-term dollar investments pay.

Last year, when the Fed was pursuing an easy money policy, the return on 91-day Treasury bills, a popular medium of investment for foreign governments, dropped below 1%. This low interest

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See Clues on page 190

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rate encouraged transferring surplus dollars into gold; it also encouraged foreign bond flotations in the U.S. Now, the Fed's tight money policy makes it possible to earn 3% and more on short-term investments. This should cut down on the turning of dollars in for gold, as well as reduce foreign borrowings.

It's generally expected that the Fed will continue to press its tight credit policy. But most European countries are cutting their rates because of the slowing down of their boom. This is not being done in any conscious effort to divert funds to the U.S. but simply because domestic considerations dictate such a policy.

• **Safeguards**—The U.S. does not need foreign cooperation to prevent a run. On the contrary, it could take unilateral action to stop the sale of gold, which admittedly, would be a last-ditch action. But if gold should continue to flow out, the chances are that Congress would adopt protectionist policies designed to cut imports.

• **Just Talk**—Some Fed officials say that the current weakness of the dollar is welcome because it focuses attention on the need to fight inflation and reinforces the Treasury's desire to achieve a balanced budget.

Both the Fed and the Treasury have warned that unless inflation is stopped, a run on the dollar may begin. But it is questionable whether they really fear such a run—at least at present.

The British, though, have been freely predicting a "run" on the U.S. gold stock, much like the run on sterling in the late summer and fall of 1957, before the Bank of England raised its discount rate to 7% in a "shock treatment" attempt to stop the flight.

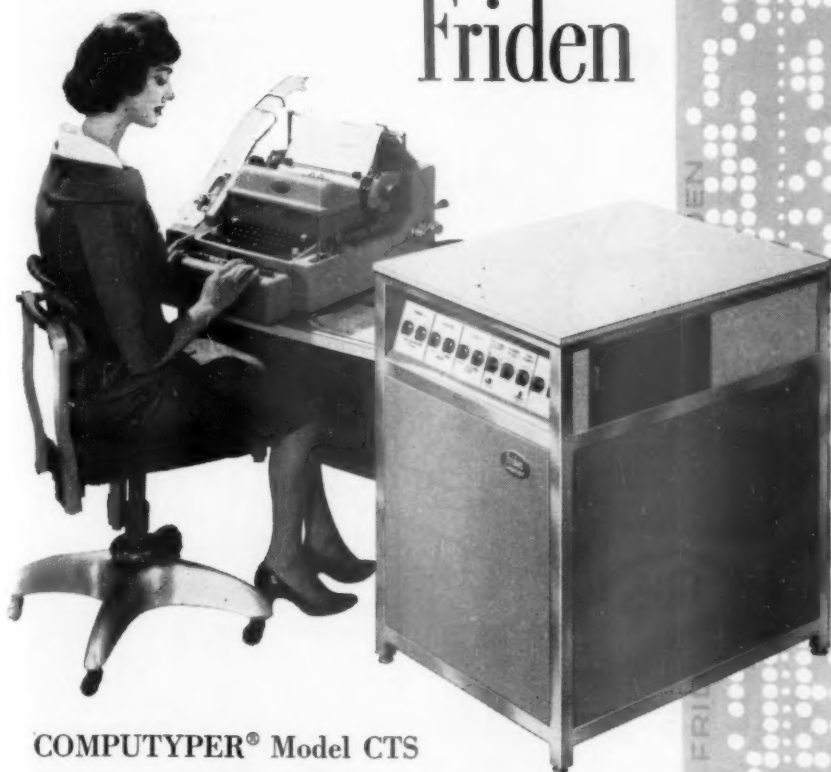
At that time, the British complained that the European press, particularly the German papers, were spreading rumors of the weakness of sterling. Now the British press, and some British financiers, are talking up the weakness of the dollar.

The rumor of an agreement may be in line with the current British campaign because it indicates that the dollar needs shoring up. Officially, though, the British government does not take this view.

• **Good Creditors**—There's no question that the U.S. position has changed. Delegates at the meeting discussed the increase in foreign competition and the emigration of U.S. industry to foreign sources. Both these factors have cut down on U.S. exports abroad and helped bring about the current shift in international payments.

Some delegates thought that this was healthy. As one American banker put it: "This is what everybody has been asking us to do for years. We are just behaving like good creditors." **END**

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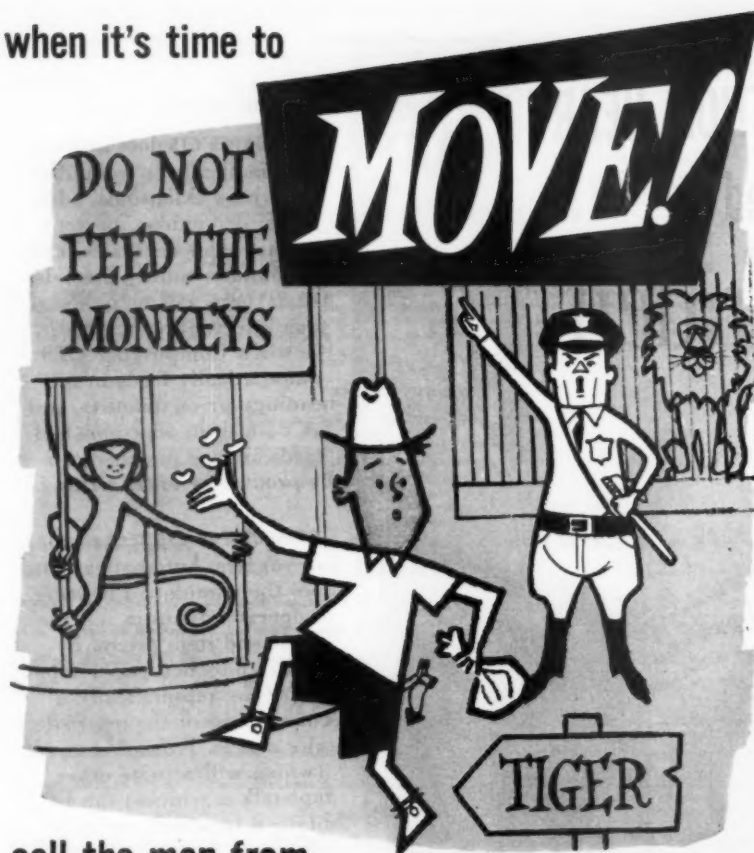
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Credit in Canada

Commercial banks called on to tighten loan policies as a check on inflation. They are expected to go along.

In true central banking tradition, James E. Coyne, Governor of the Bank of Canada, this week called in the heads of Canada's 11 chartered commercial banks, and laid down the line on a new, tougher credit policy designed to halt inflationary forces.

Though the meeting was secret—as are most of the Bank of Canada's actions—Coyne reportedly told the bankers that from now on they must rigorously screen out borrowers—finance companies, for example—that might be expected to add fuel to the inflationary fires. In particular the Bank of Canada wants to avoid further inflationary increases in the money supply, which, partly because of the failure of Canada's massive refinancing of its government debt last year (BW—Jul. 19 '58, p. 89), has increased over 15% in the last year and a half.

- **"Suasion"**—Coyne has no legal power to slap an absolute freeze on credit. But in a tightly knit community of only 11 banks, the force of this sort of "moral suasion" is tremendous. Moreover, he does have power to increase bank reserve requirements—thus restricting lending—if the banks don't go along.

Though it falls short of a credit freeze, this new, tighter money policy represents a definite clamp on credit in Canada. In many respects it is similar to, though less severe than the extreme credit restrictions imposed in Great Britain after the Suez crisis, when the Bank of England's discount rate was lifted to 7%.

- **Recovery**—Coyne's action comes at a time when the Canadian economy—in spite of unemployment that's still about 8% of the labor force—is beginning to show signs of recovery from a recession that has been much longer and more severe than its U. S. counterpart. Most importantly for the credit outlook, there has been a sharp upturn in the demand for business loans.

It's expected that the chartered banks will fall in line. One bank is reported already to have sent out a circular to its branch managers telling them, in essence, to "slow down" on the number of loans they are making.

The buildup of the credit squeeze in Canada is evident in the near-vertical climb of short-term interest rates in the Toronto money market. As recently as early March, Canadian Treasury bills sold on an average yield of 4.06%; last week the going rate was 4.91%. **END**



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Dividends Head for a Record

This year's payout should be the highest ever, although 1958's high ratio to earnings is unlikely to be maintained. That may bring some squawks.

Dividend policy, always a sensitive subject among corporate executives, is touchier than ever these days.

Last year, management gambled that the business slump would be shallow and short-lived. To show their confidence, most corporations kept up their payments by bumping payout ratios (BW-Oct. 4 '58, p76). Dividend payments in 1958 totaled \$12.3-billion (down only \$110-million from 1957), while corporate net income reached \$18-billion—for a 68.3% payout ratio, as compared to 56.9% in 1957, and 52% in 1956.

This year's dividends will be higher and should hit a new record, but it is doubtful that last year's high payout ratio will be maintained. As most financial analysts see it, the payout ratio should drop to the old level of around 55% to 56%. If so, it's bound to disappoint a great many stockholders, and could cause some ticklish problems for management later this year and next.

• **Rainy Days**—There are a number of reasons why payout ratios won't stay high. For one thing, rates aren't changed on whim—even in the face of rising corporate profits. Many companies prefer to retain more earnings in flush years, so as to maintain payments in lean times. That's why they were able to keep up payments so well last year, and is one reason why most corporations are likely to stick to their traditional policy.

In fact, history shows that the percentage of earnings paid out in dividends tends to drop sharply when earnings rise, since many companies prefer some sort of dividend stability. This pattern should hold true in 1959.

Corporations also are reluctant to hike dividends unless they are certain they can maintain the increase even during a business slowdown. And since profit margins in general show no sign of a permanent change for the better (BW-May 9 '59, p65), a number of companies won't boost payments until it is certain sales volume will keep up.

A case in point is American Radiator & Standard Sanitary, which had cut its dividend from 25¢ to 10¢ in March, 1958, upped it to 15¢ this March. That's enough for now, says Pres. Joseph A. Grazier, who explains that below-capacity operations and competition make it hard for the company to raise prices in order to absorb higher costs. Grazier says another boost in the

dividend will only come when the business recovery is solidly established.

• **Other Factors**—In making dividend decisions this year, managements will have to take a number of things into account—the price of their shares and what effect a change in rate would have; what competitors are doing with dividends; and the impact of a tightening money market on their borrowing costs. If a management thinks borrowing costs will take an unhealthy bite out of its reserve, it will maintain present payments.

Aside from the somewhat academic question of payout ratios, it's clear that corporate dividends in 1959 will break all records, barring a major business decline. The most optimistic reckon that dividends will reach \$13.7-billion, perhaps go as high as \$13.7-billion. Others are less optimistic, but no one doubts that record payments will be made.

Through the first quarter of 1959, corporations paid out \$3.1-billion, according to the Commerce Dept. That's 2.3% higher than the corresponding figure a year ago, 9% higher than the first three months of 1957, when total dividends hit a record of \$12.4-billion. Utilities, finance, and railroads account for most of the increase in dividends thus far, but analysts expect substantial upturns for steels and oils, as well.

The strong upturn in dividends is seen in statistics compiled by Standard & Poor's, which shows that through April dividend increases and resump-tions outnumbered omissions and cuts in rates by almost 6-to-1. A year ago, adverse actions outran dividend increases and resump-tions by 1.4-to-1.

• **Slowing Down**—S&P's figures, however, show the pace is easing. In April, for instance, fewer companies (70) increased their dividend than in any month this year—the high was 110 in February; fewer (32) handed out extras, and fewer (11) resumed payments. This indicates that management is taking a second look at the generous policy evident early this year.

Some financial analysts take strong exception to any apprehension on management's part. They feel that corporations showed courage in maintaining dividends last year, and they muster two positive reasons for a payout policy of, say, 60%.

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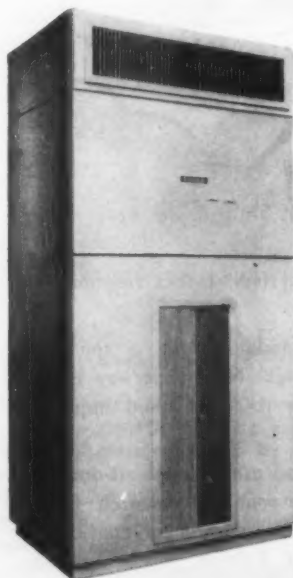
Significant Figures from the Annual Report

	1958	1957
Total Operating Revenues	\$ 37,082,486	\$ 31,232,286
Net Income	2,609,031	651,040
Preferred Stock Dividends Declared	98,650	98,650
Total Assets	47,498,788	45,477,216
Property, plant and equipment—net	35,865,899	37,191,757
Current Assets	11,003,718	7,759,778
Current Liabilities	6,247,206	4,933,477
Long-term debt	22,221,000	24,198,260
Earned surplus	5,357,065	2,846,684
Paid-in surplus	6,722,531	6,722,531
No. 4% preferred shares (\$50 par)	49,325	49,325
No. common shares	2,755,413	2,755,413

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"... some companies, reluctant to boost dividend rates . . . are likely to hand out extras this December . . ."

DIVIDENDS starts on p. 124

new plant and equipment will be relatively light this year. Many corporations, already flush with cash, won't feel the pinch of hiking their dividends. The second is that corporations should care less about the percentage of earnings they pay out, and pay more attention to the ratio between dividend payments and total cash flow—retained earnings and depreciation. The latter, the analysts say, has now become more important in determining dividend payments, since these funds are a key determinant of future expansion.

• **Continuity**—However, these arguments are likely to fall on deaf ears. Most companies feel that dividend policy is an area in which they will brook no interference—not even from shareholders. Many are more intent on establishing a continuity of dividends than they are in setting new patterns that they may or may not be able to sustain in the long run.

In view of the huge cash reserves that many companies have on hand dividend policy takes on added meaning. It is probable that management will make more use of yearend extras this year than ever before.

Some companies, reluctant to boost regular rates, partly because they don't know whether they can maintain them, are likely instead to hand out big extras this December. If they do, it will create new problems in 1960, because shareholders grow accustomed to extras, and tend to count on them as part of their regular yield.

If they don't, it also will cause problems. Actually, a good part of the decline in dividend payments last year was due to the fact that corporations didn't hand out their usual extras, much to the dismay of shareholders. So if corporations don't boost rates or pay out extras in the face of improving business this year, they'll be in for another round of criticism from shareholders.

Companies that still can't shake their fears of another business slump will continue to conserve cash by paying stock dividends. In fact, it already looks as if more companies will pay out stock dividends in 1959 than in any previous year.

Of course, many of these stock payments will come in for harsh criticism. As one financial man admits: "You can't pay the grocery bills with stock." **END**



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In Finance

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Fed's Low Estimate of Loan Demands Makes Tight Money Pinch Even Tighter

The Federal Reserve's tight money policy is squeezing even harder than the money managers had anticipated—because they seriously underestimated the soaring business loans in the hinterlands. This emerges from the Fed's upward revision of member bank required reserves in April. For each of the five statement weeks ending Wednesday, these were hiked by \$55-million—one of the largest changes in the postwar period. The revision reduced excess reserves by a like amount, thus raising the deficiency in free reserves by the entire \$55-million.

The root of the Fed's statistical trouble is in its estimates of business loan demands from so-called "country banks"—those in small cities. The Fed's estimates failed to show the full strength of local borrowings, revealed only now by the final figures. The revision in these figures means that small and medium-sized businesses across the country, lacking financial resources, are borrowing more than had been thought. But the Fed indicates that big corporations, still flush with cash, aren't as yet borrowing heavily from big banks in central reserve and reserve cities.

It's a question, consequently, whether the deficiency in free reserves may not be even tighter than the latest \$276-million daily average. This enhances Wall Street speculation that the Fed prefers to err on the tighter side.

• • •

Chicago & North Western Seeks To Ease Sinking Fund Formula

Chicago & North Western Ry. management is seeking to bolster its financial position by amending a 20-year-old formula, born of bankruptcy, that sets stiff requirements for payments into a special debt retirement sinking fund.

When the C&NW was reorganized in 1939, the road was stuck with a complicated formula for calculating sinking fund payments; management says this could hamper future growth.

The formula includes an "equity component," and the higher this component the lower the payments into the fund. Capital surplus and retained earnings—presently about \$97-million—are not now considered as equity in calculating the payments.

Inclusion of surplus in the equity part of the sinking fund formula would eliminate for the present the amount earmarked for the fund, leave more money available for general corporate purposes, including property improvements and possibly dividends. A C&NW spokesman says, however, that dividends are at least a year off.

Holders of some 77% of the nearly \$50-million in first mortgage bonds have agreed informally to the pro-

posal. Early indications from a few large holders of the \$67.5-million second mortgage bonds indicate they, too, will go along. But C&NW expects it will be more than a month before it knows whether it can get the required two-thirds approval.

• • •

H. L. Green Earnings Get Jolt As Result of Olen Co. Merger

H. L. Green Co., the variety chain that ran into trouble when it merged with Olen Co. last fall (BW—Apr.25'59,p125), now figures the asset shortage resulting from the merger at \$4-million. A Green spokesman said the deficiency could eventually run to \$5-million. The company has filed suit against Maurice E. Olen, Green's former president, alleging that Olen Co.'s books were falsified by understating its liabilities and overstating its assets.

The shortage cut deeply into Green's 1958 earnings. Some \$1.4-million of the deficiency was charged against last year's earnings—a deficiency equivalent to \$1.01 per share. As a result, net profits for the year were \$1.7-million, or \$1.22 per share, down from \$3.2-million, or \$2.72 per share, in 1957. Green's new president, Joseph H. Unger, admits: "The year will be a difficult and challenging one."

Meanwhile, Wall Street buzzed with the rumor that Meshulam Riklis, Minneapolis financier and director of Butler Bros., was quietly buying up shares of Green in the open market. Riklis reportedly made an unsuccessful bid for Green last year.

• • •

Tough California Law Puts Curbs On All Types of Installment Sales

Sales finance companies and other installment sellers this week were taking a long, hard look at a new law, just passed by the California legislature, which brings all their activities in the state under strict regulation. Previously, only automobile installment sales had been regulated by the state.

The new act, which applies to time sales of services as well as goods, will limit credit charges to a maximum of 10% of the first \$1,000 of a contract and 8% on all amounts in excess of \$1,000. (These are nominal rates; effective interest rates can run almost twice as high.) In addition, the bill outlaws "fine print" on sales finance contracts and requires full disclosure of just what the time charges are.

It also gives the buyer the right to rebate of interest if he prepaies his contract; it protects him from wage assignment during the first 60 days of default; and it entitles him to collect attorney's fees if he is the winner in a dispute over contract terms.

California's new law is part of a nationwide trend to tighter control of installment financing. Since 1956, 16 states have passed laws regulating installment sales; four bills are currently pending in states where no such laws existed previously; and amendments to present laws are awaiting action in 12 more states.



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and engineering backgrounds . . . benefit from one-source responsibility for quality and performance in equipment that is designed, engineered, and manufactured to work together.

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MANAGEMENT

Reshuffling Auto-Lite for Survival

With reorganization plus new products and markets, Electric Auto-Lite doesn't stand to suffer when Chrysler cuts buying.

The top brass of Toledo's Electric Auto-Lite Co., the largest independent maker of automotive electrical equipment in the world, assembled for luncheon one day early this month in the Toledo Club. The purpose of the gathering, they thought, was to introduce the company's new vice-president and director of sales, Edwin R. Stroh.

Stroh was introduced, all right, but James P. Falvey, Auto-Lite's president since 1954, had an announcement that wasn't on the program. To the surprise of most of the 16 vice-presidents, he revealed that he was about to move up to chairmanship of the board—and would be replaced as president by 40-year-old Robert H. Davies, a vice-president of Clark Equipment Co. Davies had been secretly elected the previous day at a special Auto-Lite directors' meeting in New York.

This was startling news to Auto-Lite management men, even though the last five years have accustomed them to change. The announcement came five years from the day Royce G. Martin, for 20 years the company's flamboyant president, died minutes after Martin's horse Goyamo finished fourth in the

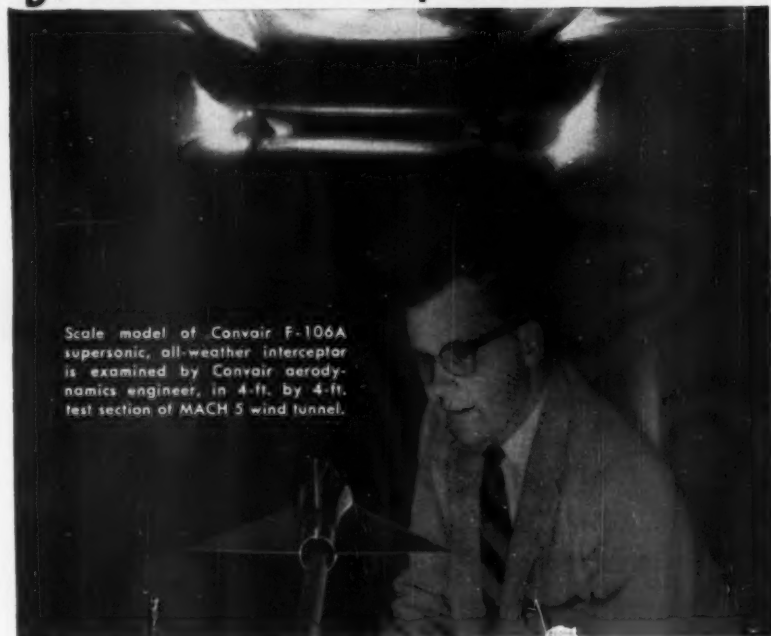


MANAGEMENT TEAM includes (from left) G. E. Spaulding, Jr., research director; E. R. Stroh, sales vice-president; R. H. Davies, incoming president; J. P. Falvey, new chairman.



AUTO ELECTRICAL GEAR—these are armatures on Toledo assembly line—has been 85% of Auto-Lite's business in past.

CB&I builds 3700 MPH Supersonic Wind Tunnel



Scale model of Convair F-106A supersonic, all-weather interceptor is examined by Convair aerodynamics engineer, in 4-ft. by 4-ft. test section of MACH 5 wind tunnel.

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CB&I was the prime contractor for this country's first "turn-key" supersonic wind tunnel at Convair Division of General Dynamics Corporation, San Diego, California. CB&I specialists handled the engineering, fabrication and assembly of the unique \$3.5 million, intermittent, blow-down type tunnel, working in cooperation with *Fluidyne Engineering Corporation*.

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B-20



GURDON WATTLES, seldom photographed New York financier, controls Auto-Lite, figures behind-scenes in its new look.

1954 Kentucky Derby (BW—Jun. 12 '54, p44). Ever since Martin's death, Auto-Lite has been undergoing radical alterations in its management structure. Now its newly constituted management must cope with a challenge on the marketing front: It is threatened with at least partial loss of its best customer, Chrysler Corp.

I. Troubles Galore

Reorganization at Auto-Lite was much more than just an exercise in the science of management—it was a necessity for survival. Few of the major companies in the sprawling auto parts industry have faced as many grievous problems as did Auto-Lite when Falvey was taking over from Martin.

Under Martin—a colorful character who had once been "financial agent" for Pancho Villa—the company had become a one-man regime with all decisions, large or small, funneled straight to the top. All the way down the line, says one high official, executives imitated Martin's methods, "with plant managers running their own little dynasties and an utter lack of communication from one part of the company to another." One vice-president all by himself was responsible for production in 28 plants from coast to coast turning out more than 400 diverse items.

"This company was just ripe for reorganization," an Auto-Lite man recalls.

• **Lackadaisical Selling**—Along with the domination of Martin's personality, Auto-Lite suffered from the lack of an aggressive selling organization, especially in the original equipment arm of its business. This weakness wasn't so apparent in the lush days of World War II and the postwar boom, but it



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Angling for shoppers' eyes and appetites, American industry last year spent approximately nine billion dollars on packaging, to win or retain preference in the gigantic "fishbowl" where consumers decide what to buy.

On a national average, each consumer takes something out of a sparkling glass container 36 times a day . . . and empties 470 glass containers yearly. Forming machines that produce 250 units every 60 seconds help account for this massive yearly total: enough glass containers to girdle the globe 22 times. Today's research promises food jars, beverage bottles, drugs, cosmetics and chemicals containers 20% lighter . . . yet with improved thermal-shock, impact, and internal pressure strengths. Despite all the improvements in container quality, it costs no more to pack foods in glass now than it did in 1929.

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showed up—and painfully so—in the competitive 1950s. "It was not unusual under the old setup," according to one Auto-Lite vice-president, "for a customer not to see an Auto-Lite salesman more than once or twice a year."

In part, this flaw sprang from the company's heavy reliance on original equipment for autos for its keep. It leaned particularly on Chrysler Corp., which a few years back accounted for roughly 50% of total Auto-Lite sales volume. The figure has dipped a little since then, but Chrysler has had a steady appetite for Auto-Lite products.

"Most of the business in the good old days was obtained from Chrysler by Martin himself, through his close personal relationship with top officials of that company," explains an Auto-Lite executive. "As a result, the general thinking was almost directed toward discouraging getting business from other sources."

• **Chrysler On Its Own**—With such dependence on one customer, it was natural that management shuddered last year when Chrysler announced plans to make its own electrical equipment. Auto-Lite is providing technical aid to help Chrysler set up facilities for production of generators, starters, distributors, and voltage regulators—products that account for half of Auto-Lite's Chrysler business. In return, Chrysler has agreed to buy 90% of its requirements of those items for 1960 models from Auto-Lite; in addition, it has an option to take 100% of them for 1960 and 90% for 1961.

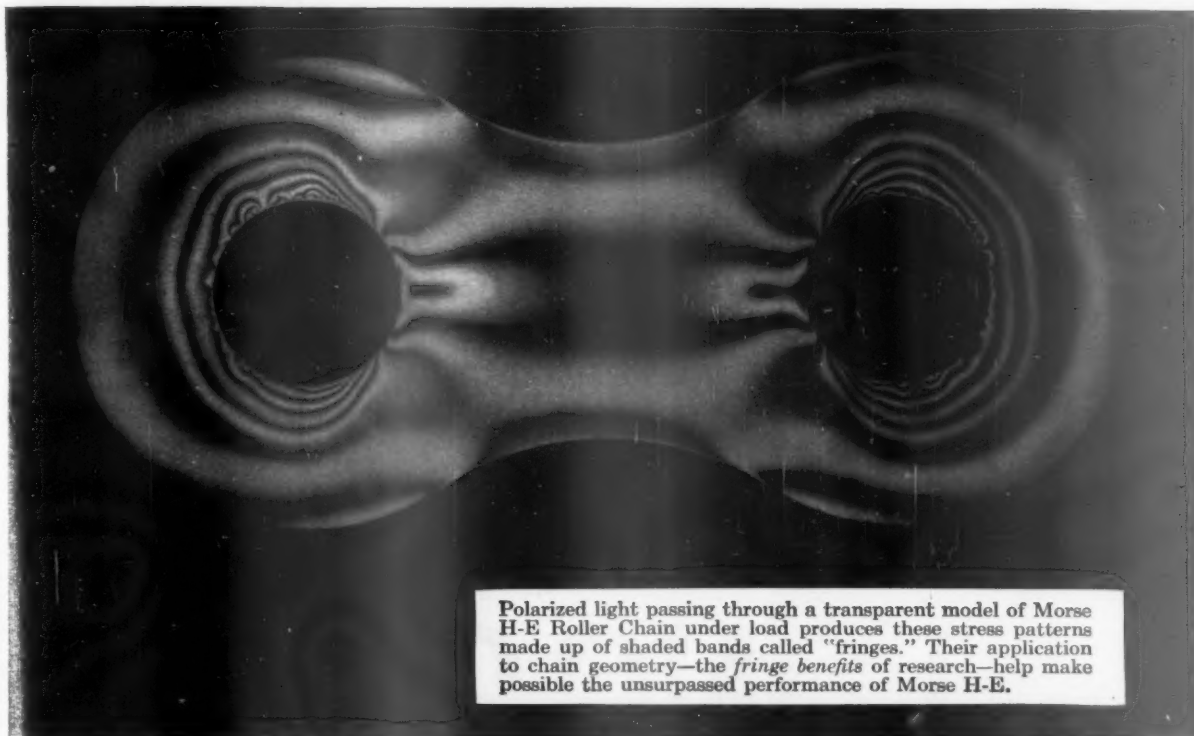
According to present schedules, then, most of Auto-Lite's Chrysler business may disappear by 1961 at the earliest—if Chrysler doesn't exercise its option.

• **Cost Woes**—High-cost production was another worry—one that has been relieved only recently through the intensive efforts of Falvey and his industrial relations director, Vice-Pres. Francis M. Wistert.

Martin, in his day, liked to take a personal hand in labor negotiations, especially those with the big United Auto Workers unit in Toledo. All too often, as it turned out, Martin made concessions that have come back to haunt the company. Auto-Lite's wage rates rose substantially above those of its principal competitor, General Motors' big Delco-Remy Div.—in many cases, 40¢ to 50¢ an hour more for similar work.

"It's not hard to see how it happened," says a member of the Auto-Lite brass. "During the war, it was production at any cost, with the union in an enviable position. Then, in the big post-war market, the push was on in production—the market was there to consume. Next thing you know, dealing as we do with a militant union, our wage structure got way out of line."

By 1954, Auto-Lite found itself los-



Polarized light passing through a transparent model of Morse H-E Roller Chain under load produces these stress patterns made up of shaded bands called "fringes." Their application to chain geometry—the *fringe benefits* of research—help make possible the unsurpassed performance of Morse H-E.

Photoelastic stress study shows . . .

"FRINGE" BENEFITS MAKE MORSE H-E CHAIN LAST UP TO 5 TIMES LONGER!

Improved design . . . special mechanical and metallurgical processes give Morse H-E a 95% higher endurance limit

"Fringes"—the shaded bands which make up photoelastic patterns—show the intensity and distribution of stresses set up in a chain link-plate model under load. Morse engineers first use this knowledge to improve chain geometry. Then Morse production engineers apply advanced mechanical and metallurgical processes to side plates. Result: Morse High-Endurance Roller Chain, with up to 500% longer life under repeated heavy loadings.

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ing to Delco-Remy most of its business from the hard-pressed auto makers outside the Big Three. That same year, Chrysler volume slumped sharply. This was when Auto-Lite really began to feel the cost pinch of its high wages. Only an income tax credit saved it from suffering a loss in 1954.

• **Imperfect Plants**—Martin's administration also left behind a sprawling network of 28 plants, some of them modern and efficient but others quite the reverse. Says an Auto-Lite veteran: "It was the old story of the best defense being in having enough capacity to do the most you are ever asked to do—but it meant that for much of the time, you had expensive, idle capacity on your hands."

II. Falvey Goes to Work

In spite of all Auto-Lite's problems, the company was tempting to outside investors. The quality of its products was accepted around the world. It had an established reputation as a leading supplier to the auto industry. It had production facilities and engineering and research talent. It also had a net worth of more than \$103-million, including physical assets worth more than \$62-million.

These blandishments did not go unnoticed. Gurdon W. Wattles, New York financier and industrialist, began acquiring Auto-Lite stock through Mergenthaler Linotype Co., of which he is board chairman. In 1956, C. Russell Feldmann, an associate of Wattles, moved onto the Auto-Lite board, and in 1957 Wattles became chairman of the board.

Wattles has built his empire through three investment companies he controls—Century Investors, Inc., Webster Investors, Inc., and American Manufacturing Co. These three companies control Mergenthaler, which, in turn, controls Auto-Lite with a 17% stock interest as of Mar. 31. And Auto-Lite, in its turn, holds a 332,900-share chunk of the giant Crane Co.

• **Changes Begin**—Wattles says he went into Auto-Lite at Falvey's invitation in late 1956. He has defined his approach to a company as "policy and planning: that's my area of attack." But he attacks without fanfare.

At Auto-Lite, changes had begun under Falvey before Wattles officially became one of the brass. But soon after Wattles arrived, the trend became increasingly evident.

To convert the company's rigid, vertical management structure into a more efficient setup, Auto-Lite carved four major groups out of the existing corporation. Each was established as an autonomous unit headed by a vice-president, in most cases imported from outside. As far as possible, the groups were



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Are we gaining in the fight against fire?

from the Clients' Service Bulletin of The American Appraisal Company

Last year, for the second straight year, fire losses in the United States exceeded one billion dollars, according to estimates of the National Board of Fire Underwriters. By contrast, the total for 1905 was only 165 million dollars. Considered alone, these figures might not indicate much progress in the fight against fire, but when viewed in the proper perspective, they may not seem so dismal.

Inflation a factor

If the losses in 1905 were converted to 1958 dollars, they would probably exceed the 1958 losses. Too, we must consider the tremendous expansion in properties subject to fire in the last half-century. The N.B.F.U. July, 1957, bulletin, **FACTS AND TRENDS**, pointed out that by 1952 the national assets subject to fire were 12 times as great as in 1905, while fire losses had increased only five times.

Inflation is undoubtedly an important factor in the steadily increasing estimate of fire losses. Losses are computed on the basis of current values. Each year the cost of buildings and equipment has been increasing. Our Construction Cost Index in October, 1958, for example, showed an increase of approximately 37% since 1948 and 18% since 1953.

Periodic checks needed

These construction index figures are broad averages, which may vary widely with type of structure and locality, but they do indicate the need for periodic checks of value to make sure that fluctuations in price have been properly measured. The property should also be checked for additions, deductions and transfers, as well as for changes in condition.

The allowance for accrued depreciation should be made independently of the accounting records and with proper consideration of the maintenance program.

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based on homogeneity of product. The groups are:

- The battery group, headed by Lawrence L. Garber, formerly a vice-president of manufacturing for H. K. Porter Co., Inc.

- The electrical products group, largest of the four, covering Auto-Lite's five key items—starters, generators, distributors, regulators, and small electric motors. Its top man is John J. Bohmrich, who until last year was vice-president and assistant to the president of Fruehauf Trailer Co.

- The spark plug and ceramics group, headed by Robert Twells, former manager of Auto-Lite's spark plug plant in Fostoria, Ohio, and a leading authority on ceramics.

- The general products group, a catch-all including the Instrument & Gauge Div., Wire & Cable Div., Foundry Div., and some miscellaneous manufacturing. Its boss is Robert Valk, brought in from National Supply Co., where he was a works manager.

Falvey says these men "are, in effect, running their own smaller companies within the corporation."

- **New Posts**—To back up the group executives, Auto-Lite made other management changes. In 1957, George E. Spaulding, Jr., formerly the company's chief ignition engineer, was named research director, with the job of coordinating all research and development. Each of the four groups has its own research staff, but if they need extra help, they can turn to Spaulding's R&D division—which, in turn, can "buy" assistance from the research experts within the groups.

Spaulding's appointment was part of a stepped-up R&D program, aimed at developing new products and new uses for existing products. The company is experimenting in high-temperature ceramics, nuclear ceramics, high-temperature wire research, hydraulics, electronics, pneumatics, electro-mechanics, and other fields.

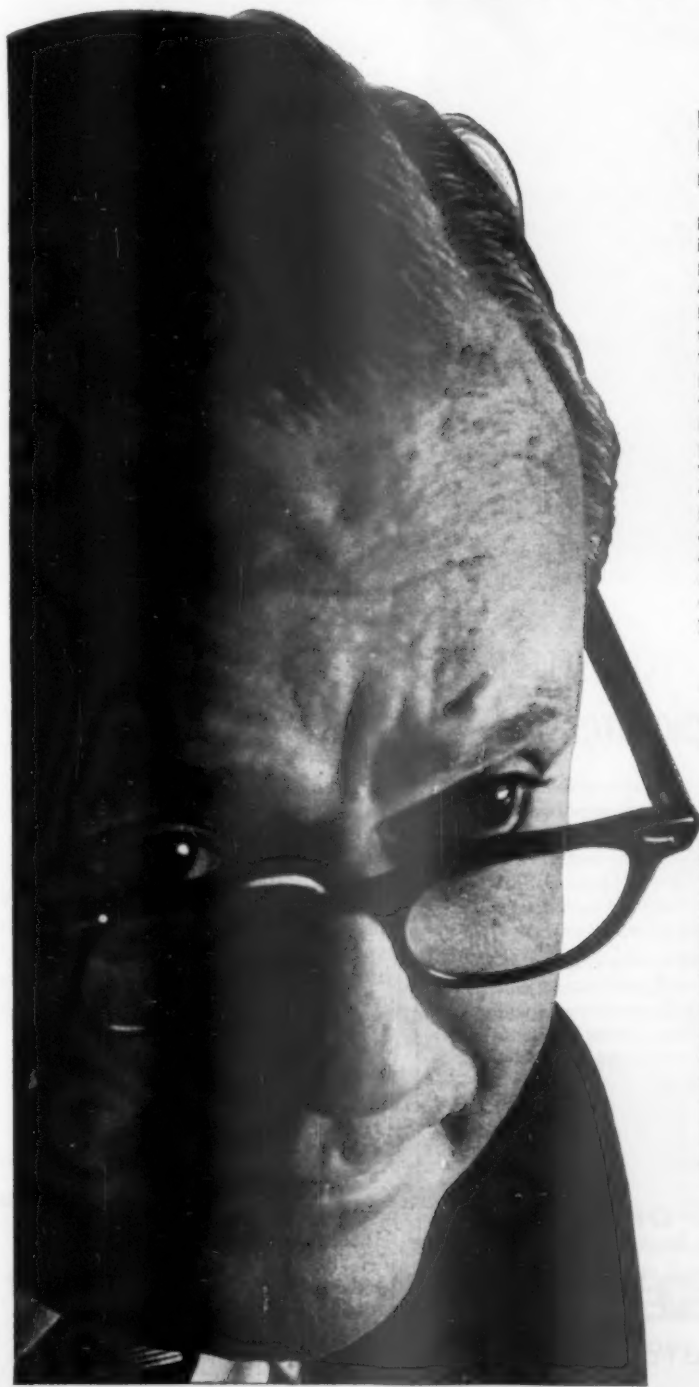
Last month, Falvey announced the naming of Stroh to the new post of vice-president and director of sales. Stroh, formerly vice-president and automotive sales manager for Holley Carburetor Co.—where he learned his way around Detroit—will direct all Auto-Lite's sales efforts. The company has developed a revitalized and aggressive marketing program extending all the way down through the sales force.

In addition to trying to move its products into new markets, the company has established training schools across the country for its veteran servicemen.

- **Davies' Election**—The most dramatic executive change, of course, was the election of Davies to succeed Falvey as president. By June 1, Davies expects to wind up his duties as vice-president

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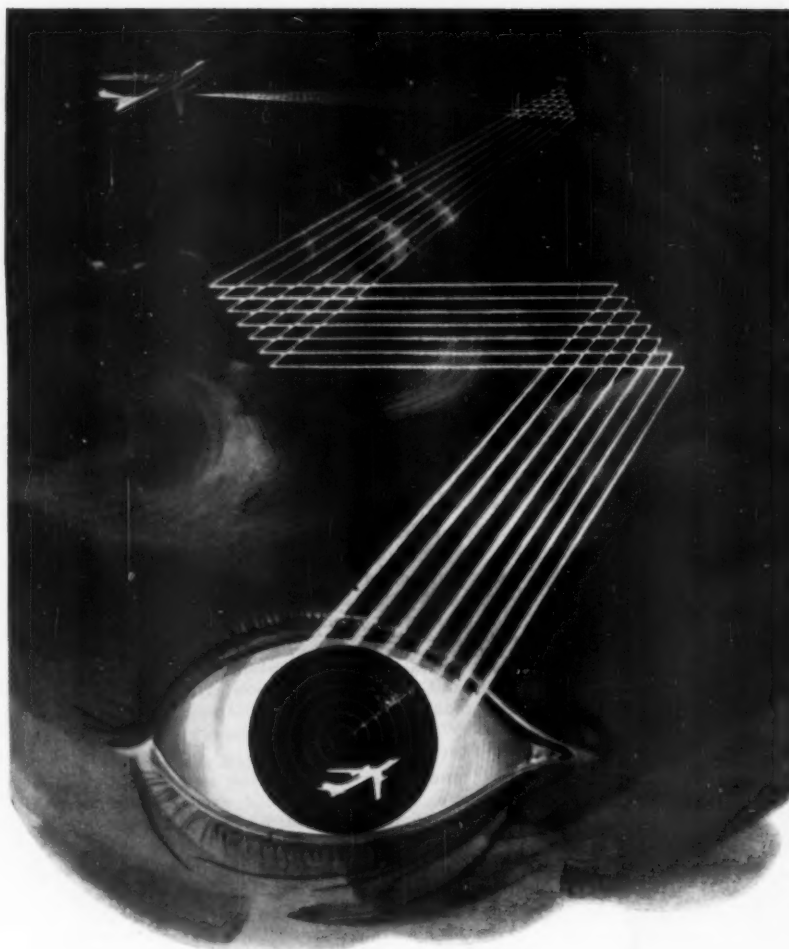
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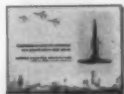


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CREATIVE LEADERS IN FLUID SYSTEMS

and general manager of the Industrial Truck Div. of Clark Equipment and devote full time to Auto-Lite.

Wattles and his associates started considering Davies for the Auto-Lite job several months ago. Wattles liked the fact that Davies was with a company that had once sold almost entirely to the automotive market but had built other business successfully while still increasing its automotive volume—exactly what Wattles wants at Auto-Lite. At Clark, close observers believe, Davies was among the top prospects for the presidency.

Though he's only 40, Davies has 20 years of experience in engineering and sales. This background will nicely complement Falvey's; Falvey is a lawyer regarded as a top administrator and organizer. It's likely that Falvey will concentrate on the existing company while Davies develops new lines. Ultimately, Wattles' plan is that Davies will step up to become chief executive.

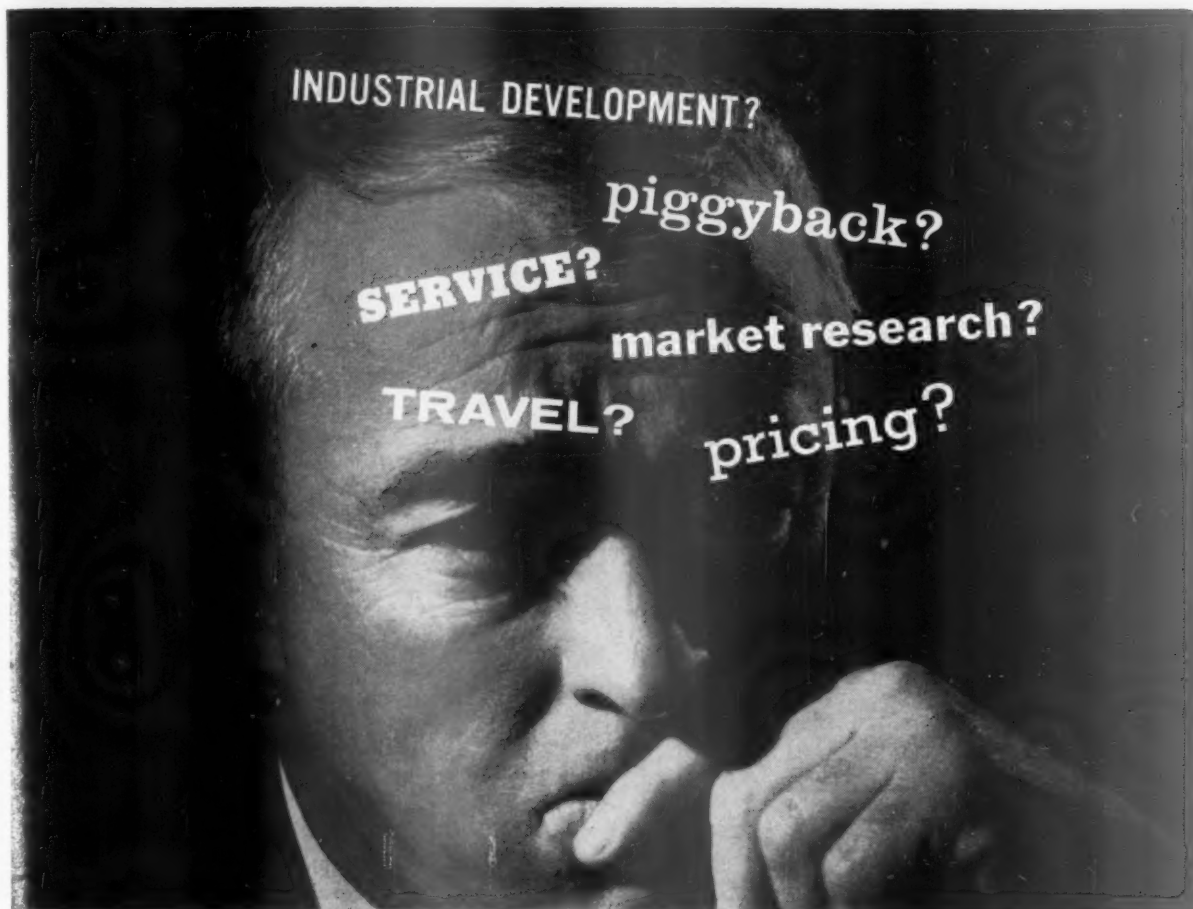
With Falvey replacing him as board chairman, Wattles takes over chairmanship of the executive committee—a post formerly held by Feldmann. However, Feldmann stays on the committee and remains a director.

• **Cost Cutting**—At the same time that Falvey and Wattles were reorganizing Auto-Lite's management, they were trying to reduce costs throughout the company.

Since early 1957, Auto-Lite has sold, closed, or consolidated seven plants, including the giant 3.3-million-sq.-ft. Lockland plant outside Cincinnati, sold to General Electric for \$15-million. "We did everything we could to put that plant in the black," says Falvey, "but it was just too big." The shutdown program also affected a battery plant in Paramount, Calif., foundries in Toledo and Mt. Vernon, Ohio, and plants in Sharonville, Ohio, and—announced just last week—LaCrosse, Wis. It also halted battery production in Niagara Falls, N. Y., and consolidated several other operations for added efficiency.

• **Product Study**—While it was shuttering unprofitable plants, the company started evaluating every product it made. It discovered a number of small, seldom ordered products that could be dropped, such as tiny switches, nameplates, motor components, and such. "There is no point in our tooling up to try to compete with a guy who can make an item in his garage or backyard shop," says an Auto-Lite executive. Other items were transferred to newer plants, and the evaluation program was established on a continuing basis.

The company also saved money by reducing the number of salaried employees. In some cases, high-paid executives were not replaced after they retired. At the cost of a two-month strike last winter by the UAW, it man-



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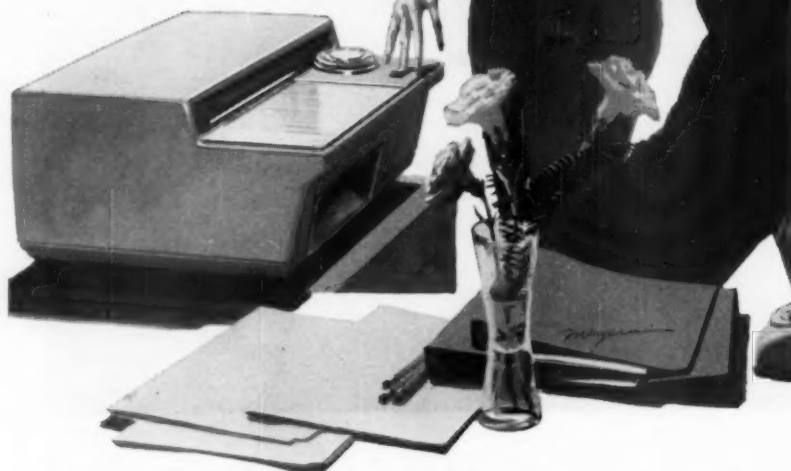
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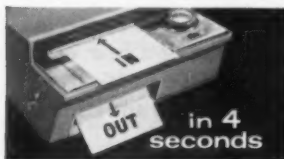
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aged to eliminate from the payroll some expensive contract provisions. Among other things, the number of union committeemen paid by management was reduced.

III. Rewards of Reorganizing

"We've taken the slack out of the organization," Falvey said recently, "and the first results are beginning to show up."

In the first-quarter 1959 report, for instance, Falvey noted net earnings of \$1.9-million on sales of \$41.8-million. The earnings were nearly triple those in the similar period of 1958—on almost \$3-million less sales. Besides the reorganization and cost cutting, Falvey credits especially a more favorable dose of replacement sales, where the profit margin is better.

For 1958 as a whole, Auto-Lite made \$2.3-million on sales of \$168-million. This suggests that the company has managed to lower its break-even point far below its traditional \$200-million sales, and might well be able to lose Chrysler business without replacement and still not suffer a deficit.

• **Prices and Products**—The attack on costs has been so successful that in many product lines Auto-Lite has been able to reduce prices despite boosts in the costs of raw materials and labor. This has been particularly true in the key electrical products group, accounting for roughly one-third of total volume.

Meanwhile, the company's R&D men have been steadily introducing new products. The best known is the transistorized ignition system now under test. But stockholders at last month's annual meeting also saw a new sequence control device for jet engines, a hydraulic device for the marine industry, special wire for nuclear uses, and industrial ceramics.

In addition, the sales staff has been wooing and winning new business. There's a sizable contract with American Motors for equipment for its 1960 models. Outboard Marine Corp. has become an important customer, and success in the farm equipment field is growing. Auto-Lite is also moving in on missiles, jet aircraft, heavy construction, diesel engines—and practically any other area where its products might be applied.

"We've already got commitments that will take a big chunk of the volume that will be moving out in the form of Chrysler business in the next couple of years," gloats a vice-president.

Wattles also has in mind broadening the company through investments such as it made in Crane Co. and through acquisitions. Already, Auto-Lite has examined perhaps 1,000 possibilities for acquisition, but a finished deal is yet to come. **END**



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When the Bottom Drops Out

● Changing defense needs cut deeply into sales of Mallory-Sharon (titanium) and Foote Mineral (lithium).

● But both are recovering by diversifying their production line through intensive research efforts and mergers.

● And instead of abandoning their original metals, they are working hard to develop civilian markets for them.

It's always risky for management to put a high proportion of corporate eggs in one basket. It's especially risky if the basket happens to be defense industry—a basket whose bottom has a way of dropping out suddenly.

That's just what happened to Mallory-Sharon Metals Corp., of Niles, Ohio, which lost most of its business when the military aircraft market for titanium collapsed, and to Foote Mineral Co., Inc., a Philadelphia company, which last month shipped its last load of lithium to the Atomic Energy Commission under a contract that had been providing about one-third of its income. Both companies are now busy weaving new baskets—new products and new (preferably civilian) markets.

• **Outside Help**—Mallory-Sharon last week reached an agreement with Bridgeport Brass Co. under which the big Connecticut metals producer will make its metallurgical knowhow, fabricating facilities, commercial organization, and management resources available to Mallory-Sharon in return for an option to buy a one-fourth interest. Bridgeport Brass has been doing a lot to develop uses for such special metals as hafnium, columbium, tantalum, zirconium, and titanium. So has Mallory-Sharon.

Mallory-Sharon was formed to capitalize on titanium in 1951, when titanium was being hailed as the wonder metal of the age—half as heavy and just as strong as steel, non-corroding. Sharon Steel Corp., with slack rolling mill capacity, and P. R. Mallory & Co., Inc., with research knowhow in the newer metals, created Mallory-Sharon Titanium Corp.

The new company's whole research and sales effort was aimed at one market, subsonic aircraft. Manufacturers of military aircraft were buying titanium heavily for frames and jet engines. By March, 1957, Mallory-Sharon was operating around the clock.

• **Crushing Blow**—Then design specifications for air vehicles began to exceed the temperature ranges in which titanium's performance had been researched. The crusher came suddenly in mid-1957 when the government announced its defense effort would stress missiles.

Before the end of 1957, Mallory-Sharon was running at 30% of capacity.

• **New Program**—To salvage its plant and equipment investment, Mallory-Sharon worked out a three-point program: (1) to integrate production from raw material to mill shape, (2) to broaden the base for the materials it was already producing, and (3) to begin market development, research, and production of new metals that could be produced with existing facilities.

A tie-up with National Distillers & Chemical Corp. enabled Mallory-Sharon to produce its own sponge of titanium and also of zirconium, for which there was a growing market. So Mallory-Sharon Titanium became Mallory-Sharon Metals Corp., owned one-third by each of its two former owners plus Distillers.

"People had come to think of us," says Mallory-Sharon Pres. Frank H. Vandenberg, "as producers of titanium alone. In changing our name, we wished to make it plain that we intend to make Mallory-Sharon a leader in the field of special metals."

• **More Research**—To get that leadership, the company plans to spend proportionately more on research—on columbium, tantalum, tungsten, molybdenum, and hafnium, in addition to titanium and zirconium.

Mallory-Sharon hopes to sell more titanium by cutting the price and improving the performance. The total market for the metal, however, is not expected to reach its 1957 peak of 5,600 tons for at least five years.

Prospects are brighter for zirconium, chiefly as a material to contain the fuel elements used in atomic reactors. But that's defense business again.

"From now on," says Graham B. Brown, vice-president and director of marketing, "we'll put as many eggs in as many baskets as we can find. If half of them hatch, we're in business."

• **Foote's Problem**—Foote Mineral Co.'s problem is not so acute as Mallory-Sharon's. For one thing, it didn't have quite so many of its eggs in the broken basket. And it had more warning.

AEC has been using lithium, the

lightest solid element known, in the production of thermonuclear bombs. Apparently, it now has stockpiled all it wants. Last fall, Foote learned that the 1954 contract which called for taking all of Foote's lithium output would not be renewed.

Foote, however, had realized from the start that to supply AEC it would have to expand capacity well beyond normal commercial expectations.

• **Early Diversification**—Foote began to diversify just as soon as it got the new lithium facilities for AEC running. "We set up a well-defined policy on mergers and diversification," says Chmn. Gordon Chambers. "Anything we took on had to be in the field of industrial raw materials—metals, chemicals, ores. We took care not to panic into a lot of miscellaneous functions." The boost the AEC sales gave Foote's earnings provided the means to expand.

In 1956, Foote acquired Electro Manganese Corp., Knoxville, Tenn., producer of electrolytic manganese, a metal whose market—primarily in stainless steel—has been growing steadily.

Last year Foote and Hooker Chemical Corp., of Niagara Falls, N. Y., established a joint subsidiary, HEF, Inc., to produce ammonium perchlorate, an oxidizer for solid fuel propellants.

• **Sales Agreement**—Later last year, Foote signed an exclusive sales agreement to market nickel and cobalt for Sherritt Gordon Mines, Ltd., of Toronto.

In addition, Foote has used internal sources for diversification. It has been researching ways to take out such by-products of the lithium process as mica, feldspar, and beryl. It is now selling mica industrially and expects to have feldspar on the market soon.

And, of course, it is seeking to expand the industrial market for lithium. That, not thermonuclear bombs, will provide the real long-term growth for that material, Foote feels. Market development will emphasize items now coming out of the company's research, for example, highly reactive lithium catalysts. Foote has doubled research spending in the last two years.

• **Favorable Outlook**—This year, Foote's sales will be down, from \$24.5-million in 1958 to about \$22-million, Pres. L. G. Bliss predicts. However, he thinks, the long-range outlook is favorable. The industrial market for lithium compounds today is estimated at 10-million lb. annually. And with a fully paid for 15-million-lb. capacity plant, sitting beside the largest lithium deposits in North America, Foote is ready and waiting for the market to catch up to its capacity. **END**



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INTERNATIONAL OUTLOOK

BUSINESS WEEK

MAY 16, 1959



The Geneva conference is getting off to a slow start. The Soviets are haggling over every conceivable point of procedure.

Western diplomats aren't too bothered by Foreign Minister Gromyko's tactics. They had expected him to play the conference for its propaganda value, especially in trying to bolster the prestige of East Germany.

On the Western side, the betting still is that Geneva will pave the way to a summit meeting this summer.

When Gromyko has played out his propaganda game, he is expected to offer enough bait to be sure the West agrees to go to the summit. He knows that Pres. Eisenhower won't set a date for face-to-face talks with Premier Khrushchev until there's some indication that a Berlin compromise can be worked out.

It's possible, of course, that Khrushchev may switch to a really hard line at some stage of the foreign ministers' session—in the hope of getting bigger concessions from the West. For example, he might order Gromyko to provoke a breakdown at Geneva, or he might interfere with Western traffic into Berlin.

But U. S. officials doubt that Khrushchev will use such risky tactics. At the very least, they would delay a summit meeting.

The important thing to remember is this: Geneva is merely a face-saving exercise—demanded by the West so that it wouldn't look as if we were being dragged to the summit.

The real bargaining will take place when Eisenhower and Khrushchev meet. And the horse trading, when it comes, will be over Berlin. It won't be over German reunification. Khrushchev won't agree to that. Nor will it be over European arms control. The West won't buy that without reunification.

Western diplomats think a compromise can be worked out on Berlin. What Secy. of State Herter is shooting for is this:

- A new agreement that would reaffirm Western rights of access to West Berlin, plus the right of the U. S., Britain, and France to keep garrisons there.

Both East Germany and West Germany would be parties to the agreement. The United Nations might have some supervisory function.

A summit conference probably would also produce some sort of ban on nuclear testing. Khrushchev might even agree to this ahead of time. He seems about ready to make the necessary concessions for a workable inspection system.

The British are playing all the angles in their effort to come to terms with the European Common Market. They just aren't reconciled to the collapse of their scheme for a broad Free Trade Area in Western Europe.

In London, a while back, there were reports that the Commonwealth as a whole might try for a deal with the Common Market group. The idea was that Commonwealth nations should give up their special advantage in the British market in return for a better break in the Common Market.

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
MAY 16, 1959

But when Commonwealth economic officials met in London last week, this scheme got nowhere.

Now the British are talking of creating a customs union in Europe to rival the Common Market—a "Small Free Trade Area" composed of Britain, Sweden, Norway, Denmark, Switzerland, and perhaps Austria and Portugal. Swedish officials have worked out a scheme providing that members of this group give up most of their tariffs and quotas within five years. But there's not much chance that this scheme will ever get off paper. Like the Commonwealth proposal, it looks like a tactical move designed mainly to soften up the Common Market nations.

—●—

A proposal for forming a huge common market of 20 Latin American countries is gathering steam. It's still a dream. But serious discussions began this week in Panama at a full-dress conference sponsored by the U.N.'s Economic Commission for Latin America (ECLA).

Latin American countries already are experimenting with the common market idea—on a regional scale. Last year, the five Central American republics agreed to lower intercountry tariffs and integrate industries (though only three countries have ratified the final treaty). Recently, several South American countries—Argentina, Brazil, Chile, and Uruguay—have set the framework for a regional free trade community.

Latin America's economic troubles during the 1958 recession are helping to push the common market proposal. Exports, largely to the U.S., slumped around \$700-million last year. Latin countries also fear the growing protectionism of Western Europe's six-nation Common Market.

Beyond that—say ECLA's experts—Latin America in the years ahead can't depend on up-and-down trade with outside countries to meet economic needs. By 1975, Latin America's population will reach nearly 300-million, against 193-million now. Demand for industrial products probably will be four times greater than today.

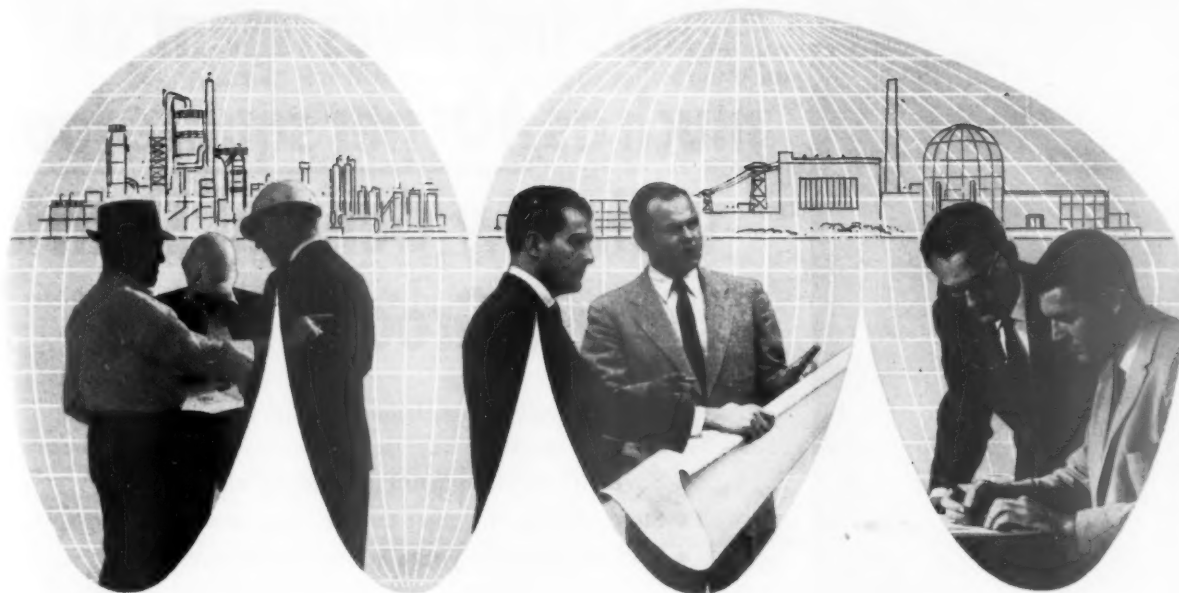
Latin America, on its own, will have to fill some 90% of this demand, according to ECLA. Most countries lack sufficient foreign exchange to afford a high level of imported industrial goods. Thus, a broad common market, involving freer trade and country-by-country specialization of industries, seems to make sense.

—●—

There's still a slim chance of keeping Iraq out of Moscow's clutches. That's the reasoning behind Britain's decision to sell arms to the Communist-dominated government of Premier Kassem. As London sees it, the deal may keep Iraq from going over completely to the Communist camp. And with deliveries some time away, there's room for canceling the deal—if the political situation worsens.

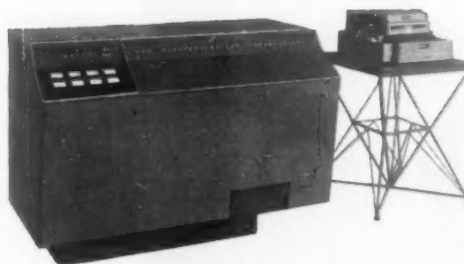
The United Arab Republic isn't happy over arms shipments for rival Iraq. It sees the deal not as a move against Moscow's increasing influence in the Middle East, but as a side blow at Pres. Nasser's goal of Arab unity.

Washington, though tacitly approving, has qualms. The arms deal may help balance power between Cairo and Baghdad. But it also may encourage Nasser to abandon recent efforts to play ball with the West.



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Pros Find New Riches in Mutuals

- Shares in the fast-growing mutual funds have long been giving satisfaction to the small investor.
- Canny traders are now catching on to the profits to be had from companies that manage and distribute the funds.
- The attention is their leverage: When sales and assets boom, costs stay stable but revenues multiply.

Mutual funds are three-headed animals. One part is the mutual fund itself, which invests its assets and sells shares to the public. A second is the distribution company, whose profits are a percentage of what investors pay to buy the fund's shares. Finally, there's the management company, which manages the fund's investment portfolio for a fee.

Sales of mutual fund shares have been booming mightily, of course, ever since World War II. This boom has led to a boomlet in the shares of management and distribution companies. The boomlet is not for the small investor who has been the mainstay of mutual fund sales; it's for the sophisticated pro who knows his way around the funds—and is willing to take a certain amount of risk.

With the risk comes a chance for profits even plumper than those realized by buyers of shares in the funds themselves—which have been buoyed by the growth of the economy and the vogue for common stocks. The reason is the leverage offered by the fund management and distribution companies. Their revenues soar when a fund's sales of shares increase, but their costs stay fairly stable. Of course, if more people cash in their mutual fund shares than buy them, the leverage works in reverse—but so far that hasn't happened.

• **Zooming Values**—In most cases, the sponsors of the funds themselves control the management and distribution concerns, and these men have been reaping handsome paper profits from the boom in sales. To cash in on these profits, some of them are now willing to sell their shares in the management and distribution companies. Canny underwriting syndicates are trying to induce owners of other such outfits to sell, too.

Many of the shares available have already registered huge increases in value, but smart investors think the surge will continue. Here are some of the results to date in over-the-counter trading:

Investors Diversified Services, Inc., stock climbed from \$1 a share in 1948 to the equivalent of \$200 a share. In the same period, total net assets under

IDS supervision increased from \$138-million to \$1.8-billion.

National Securities & Research Corp.'s outstanding shares leaped in total market value from \$1-million in 1948 to \$24-million 10 years later, while assets of its cluster of mutual funds grew from \$40-million to \$420-million.

Channing Corp., a market newcomer with industrial holdings as well as investments in mutual fund management and distribution companies, saw its outstanding stock jump from \$2-million to \$24.5-million in total market value in the last three years.

Keystone Custodian Funds, Inc., a distributing company, last week publicly offered 15% of its Class A nonvoting common. The result: a price increase from an initial offering of \$24 a share to \$51. A wholly owned subsidiary of this company, Keystone Co. of Boston, manages the \$424-million assets of the 11 Custodian Funds.

• **Legal Hurdle**—Large-scale dealing in the shares of management companies didn't begin until late last summer, following a finding in the courts that it was legal to do so. Until then, the Securities & Exchange Commission had frowned on such sales on the basis of the well-established legal principle that a fiduciary cannot traffic in the estate of his office. In effect, the SEC contended, the owners of management companies by selling their shares were capitalizing on the future value of their contracts.

The issue came to a head in a case brought by SEC against Insurance Securities, Inc.—the sponsor, investment manager, and distributor of California's \$335-million Insurance Securities, Inc., Trust Fund. The SEC sought to enjoin sale of 53% of the management and distribution company's stock—for some \$4.5-million, equivalent to \$50 a share for stock with book value of \$1.81.

A decision from the U.S. Court of Appeals—which the Supreme Court declined to review—supported the argument of Sullivan & Cromwell for the defense that such a case did not involve trading on the value of the management contract. When control of a manage-

ment company is sold, the court noted, the contract automatically terminates—and it's up to the stockholders of the mutual fund or trust to renew it or give it to another manager, by vote. In practice, of course, the contract is almost always renewed.

Until this ruling, the men behind the funds had hesitated to turn their paper profits into cash even by selling nonvoting stock.

• **Whence the Profits**—The source of these profits is the fees charged for distributing or managing a fund. Usually, a management company charges as its yearly fee $\frac{1}{4}$ of 1% of average total net assets. Thus, a management company overseeing a \$100-million mutual fund would receive \$500,000 a year. If the fund's assets climbed to \$400-million, the fee would quadruple to \$2-million. Most mutual fund men say, though, that it costs very little more to manage a \$400-million fund than one with \$100-million.

Sometimes a management company reduces its fee if assets exceed a certain amount. This practice isn't entirely altruistic, because the U.S. Treasury takes 52% of earnings anyway if the management company is incorporated—and even more if it's a partnership whose members are in the higher tax brackets.

• **Sales Commissions**—Charges imposed for distribution add more sweetening to the brew—especially when by buying the stock the investor can tap revenue from several directions. Such is the case when a management company is a wholly owned subsidiary of a distributing company, or when a holding company controls both management and distribution, or when one company performs both functions.

The distribution companies earn their keep through sale of the mutual funds' shares. The general formula calls for an 8% sales charge—most often divided 3% to the salesman, 3% to the dealer, and 2% to the distribution company. When sales volume is high, that 2% is well above costs.

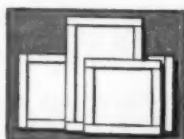
• **Townsend Plan**—Perhaps the most ambitious of investors ferreting out profits in fund management and distribution is Morris Townsend. He has organized an investment company to invest in stocks of mutual fund management and distribution concerns.

This project began in mid-1957, when Townsend headed a group that took over Resort Airlines of Delaware, a holding company whose assets included Resort Airlines of North Caro-

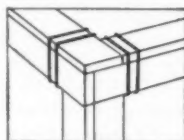
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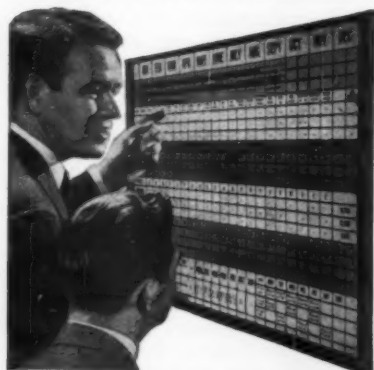
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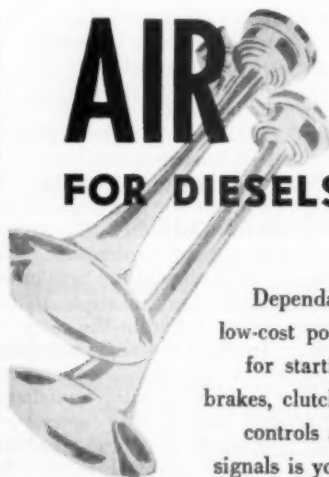
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lina, a carrier of military cargo and tour groups. The holding company became Townsend Investment Co. and later Townsend Corp. of America. This company's stock last year shot from \$2 to \$24 a share in over-the-counter trading.

• **Fund Holdings**—Besides Resort Airlines and some minor industrial and radio station holdings, Townsend Corp. has growing interest in mutual funds. So far it has:

- A 24% nonvoting interest in Hugh W. Long & Co., Inc., which, with a wholly owned subsidiary, Investors Management Co., distributes and underwrites four mutual funds with assets of more than \$675-million.

- A 5% voting interest in Television Shares Management Corp., manager and distributor for the \$245-million Television-Electronics Fund, Inc.

- A tentative deal for taking over the management and distribution of Boston's \$12-million Concord Fund.

- A 44% nonvoting interest in Income Foundation Research Corp., Pittsburgh, which manages the \$8-million Income Foundation Fund.

- An interest of about 1% in National Securities & Research Corp., New York, distributor and manager for the National Securities funds.

• **Indirect Investments**—In addition, Townsend Corp. owns 64% of the non-voting common stock of Townsend Management Co. (voting control is held mostly by a voting trust). Townsend Management in its own right has 24% of the voting stock of FIF Management Corp., manager for Denver's \$135-million Financial Industrial Fund, and an equal voting interest in FIF Associates, Inc., which distributes both FIF and Townsend U.S. & International Growth Fund, Inc. The latter is a \$3-million special situations mutual fund both organized and managed by Townsend Management.

Townsend Management also owns 100% of Wall Street's Fiduciary Counsel, Inc., which advises some 130 families with total wealth of more than \$600-million on making use of their assets. In turn, Fiduciary Counsel is sole owner of Estate Planning Corp., a Madison, N. J., outfit catering to clients worth \$1-million or more. Reportedly, it is the planner of estates valued at more than \$3.5-billion.

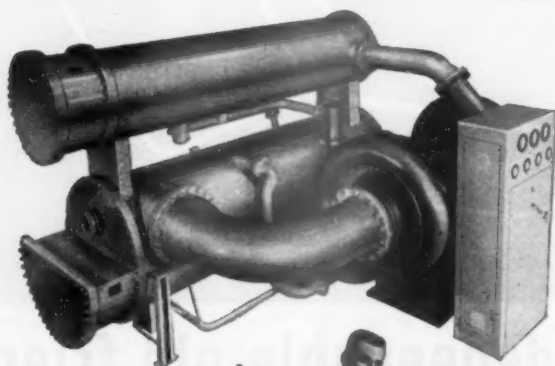
All told, Townsend's organizations have fingers in mutual fund management and distribution companies with assets of \$1.4-billion—nearly 10% of the industry's total assets. This week and last, Townsend has been negotiating to take over management and distribution of the \$85-million Managed Fund of St. Louis, run by Hilton and Hovey Slayton through Slayton Associates, Inc., before they resigned pending an SEC probe of their affairs (BW—May 27 '59, p81). **END**

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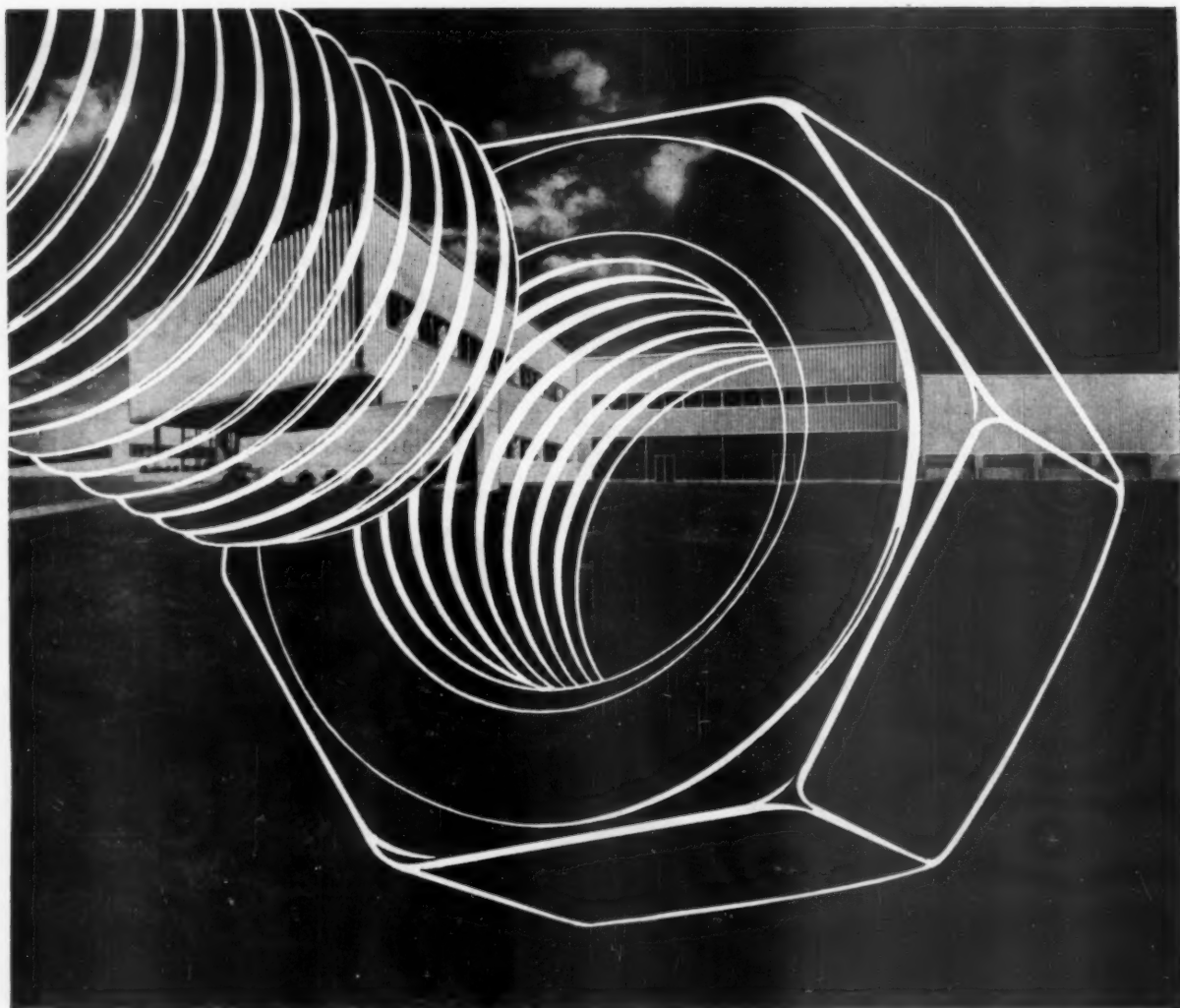
- ① **True volute casing.** A Chrysler design exclusive that minimizes refrigerant turbulence ... reducing horsepower load on the motor.
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- ④ **Automatic purger.** Removes non-condensable gases and water vapor. Prevents contamination of refrigerant system, cuts service costs.
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Investors Run, but Experts Bet on Steel

Wall Street analysts are puzzled by dip in steel stocks. Strike or no strike, they see these stocks in buying range.

"Don't sell on strike news" is one of the oldest Wall Street axioms. Like most, it has been wrong about as often as it has been right. But in steel's case today, it appears to be sound advice, although it is apparently not being followed by investors (chart).

In the past few weeks, in spite of extremely cheerful first-half earnings, most steel stocks have declined sharply from their 1959 highs, trailing the pace set by Standard & Poor's price index of 425 industrials. U. S. Steel is off \$10 from its 1959 high, Bethlehem Steel \$8, Carpenter Steel \$12, as strike fears send investors into hiding.

• **Puzzled**—The majority of analysts frankly are puzzled by the dip. As they see it, unless the unexpected happens and there is a long and severe strike, steel earnings are bound to improve over recession lows. Some analysts even say that a dip caused by a long strike would be a buying signal, since it would assure big gains in 1960.

The analysts rate steel shares—particularly after the sharp fall from their highs—as one of the most undervalued stock groups. They also feel the outlook for 1960 is bright; for one thing the coming of the compact cars should broaden the auto market.

• **Upgraded**—The real key to their thinking is that profit margins of many steelmakers have apparently taken a permanent change for the better. More facilities to cut costs are in sight, including sintering plants and stepping up melting capacity by the use of oxygen. And the increased profit margins will act as a lever on earnings as volume increases.

So analysts have upgraded the "normal" price-earnings ratios for steels. At one time, when steels were regarded as a feast-or-famine industry, steel shares were recommended when they sold at 5 to 7 times earnings. Then, as steelmakers showed they were able to increase their profitability, analysts thought 8 to 10 times earnings was a fair price to pay.

Last year, however, many companies managed to stay in the black even in the bleak months of 1958 when operating rates fell below 50% of capacity. So analysts again revised their thinking upward, now cite a ratio up to 15 times earnings as a fair price.

• **Buying Range**—Many steel stocks now are selling below that—at 9 to 11 times earnings. And this is why analysts think

Index—Week Ending 1/7/59=100

106—

STEEL COMMONS



Data: Standard & Poor's.

©BUSINESS WEEK

they are in the buying range, strike or no strike.

Yields of steel shares are richer than many other industrials. U. S. Steel yields roughly 3.4%, Youngstown Sheet & Tube 4.1%, Republic 4.5%, and Bethlehem 4.7%. Moreover, most companies are covering their dividends handsomely, indicating that dividend increases may be in store. Another possibility is that yearend extras will be declared.

• **Strike Scars**—Most analysts think a strike is a sure bet. And a strike, of course, would leave its mark or carvings. How deep is uncertain. That depends on: (1) how long the strike lasts, (2) what the steelworkers are willing to settle for, and (3) how much the steel companies will absorb of increased labor costs.

Most financial men are reconciled to a strike for four weeks at the least. If a strike lasts no longer, then earnings and production won't be much affected. The pace of the pre-strike period must be considered.

It's apparent that even if there's no

strike, most steel companies will reduce their operating rates by at least 25% in the third quarter, because inventory building in the second quarter boosted operating rates to artificial highs.

If there's a long strike, of course, all production and earnings estimates will go into a cocked hat.

• **Bright View**—Barring a long strike, the prospects for steel loom bright.

General consensus among steelmakers is that production will come close to 1955's record 117-million tons, but not quite reach it. Most companies figure on 108-million to 115-million tons. Industry earnings will move up with production; some companies should hit new earnings peaks.

• **Darker Side**—There are sour points, too, in the current steel scene. One problem will be intensified with the opening of the St. Lawrence Seaway, whose link with the sea has led to a stepped-up flow of imports. Says Chmn. J. L. Mauthe of Youngstown Sheet & Tube: "Some of our products are being sold from a few dollars per ton up to as high as 40% under our prices." **END**



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In the Markets

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Investors Shift Stock Preferences

Without Stopping Climb of Averages

The stock averages moved up this week, although some of the glamorous electronics issues, which have been scoring the biggest gains, suffered declines. This is evidence, say many analysts, of the shifting in investor preferences that can be expected at this stage of the bull market.

It appears quite likely that the days of major across-the-board advances are over. The averages may continue rising, but on a much more piecemeal basis.

This week, though, investors seemed to favor chemical, oil, and auto stocks, as well as some specialty issues. Wall Street appeared to place a bullish interpretation on the Federal Reserve's decision to tighten margin regulations, taking the view that it would tend to keep investors from selling shares.

• • •

Bond Market Continues to Languish

From Fears of Tight Money to Come

Prices in the bond market this week continued to reflect widespread fears that tighter money and higher interest rates are in prospect. In fact, anticipation of lower prices and higher yields is so general that some experts wonder whether it is being overdone.

There is no doubt about the depression in the government market. Some yields of up to 4.4% are the highest in nearly 40 years, and from the investor's standpoint they actually are higher than they look. Nearly all government bonds are at a discount from par; investors buying outstanding issues pay ordinary income tax rates on the relatively low interest income and get the benefit of the special capital gains rate on the difference between purchase price and face value when the bonds are redeemed. This makes the actual return competitive with bond issues in other sectors. The 1 1/25 of 1964, for example, now have a taxable coupon yield equivalent to 5.7% for investors in the 52% bracket.

• • •

SEC Spotlight on Managed Funds Leads

To Resignation of Investment Manager

In the wake of a Securities & Exchange Commission investigation of Managed Funds, Inc., an \$85-million St. Louis mutual fund group, Slayton Associates, Inc., has been forced to resign as investment manager of the fund.

SEC had charged that the management concern violated the law by failing to:

- Report an alleged switch to a "large turnover" investment policy.

- Report ties with a New York brokerage firm that received \$1.7-million in commissions on the fund's portfolio transactions (BW—May 2'59, p81).

The resignation was revealed at SEC hearings this week in Washington, aimed at uncovering alleged violations by Slayton Associates., run by Hilton H. Slayton, ousted president of Managed Funds, and his cousin, Hovey E. Slayton. Testimony also brought out that Slayton & Co., the retail distributors of the fund, had been sold, reportedly to Townsend Corp. of America (page 155).

At the hearings, both Hilton and Hovey Slayton denied any wrongdoing, then refused to answer any pertinent questions, pleading the Fifth Amendment.

MF's directors—who have been given a clean bill of health—thus far have tried to settle the charges privately. SEC, however, insists on pressing investigation.

Managed Funds has been successful in the past few years, both in sales and asset growth. Now it has voluntarily suspended selling any new shares. However, it stands ready to redeem shares from existing shareholders—with few takers so far.

• • •

Touring Analysts Urge Cautious Approach

By Americans Buying European Stocks

The New York Society of Security Analysts this week heard some words of caution about investing in European stocks. The warning came from a delegation of its members who toured Europe in the last few weeks (BW—Apr. 18'59, p68).

The travelers said the trip had been "invaluable" in giving them a "feel" of the European investment situation. But they strongly advised against buying European stocks without special precautions. Information about most European companies is so scanty, they said, that before a U.S. investment house gets into European securities it should either (1) set up a branch in Europe, (2) establish close correspondent connections with a European firm, or (3) limit purchases to shares in an investment trust that has good overseas contacts.

• • •

The Markets Briefs

The Bank of Nova Scotia has a new wrinkle to its plan enabling U.S. residents—prohibited by law from holding gold—to buy certificates representing gold held for their account in Canada. Through an arrangement with Samuel Montagu & Co., Ltd., leading London gold merchants, BNS will issue gold certificates that can be traded in Canada or in London.

Increasing resort to revenue bonds (BW—Mar. 21'59, p47) is leading to a record volume of offerings in the municipal bond market. During the first four months, new tax exempts came to a record total of more than \$3-billion, according to the Investment Bankers Assn. Offerings of general obligation bonds dipped 22% below the comparable period for 1958, but this decline was more than offset by a 66% increase in revenue bond sales.

Steel Talkers Near Main Issues

With preliminaries out of the way, bargainers for the 12 major producers and USW will soon be down to the real issues at stake.

The eight central figures in steel bargaining this year sat down together Monday in a New York hotel suite (picture, right). Amicable at their initial meeting, they announced that they "share the common desire to negotiate labor agreements peacefully and expeditiously." Thus the second phase of 1959 talks began—the joint bargaining between the United Steelworkers and spokesmen for 12 major steel producers.

The talks continued through the week in the mahogany-furnished four-room suite 12 floors above the bustle of Manhattan streets. After short negotiating sessions Monday and Tuesday devoted to technicalities of bargaining, the parties agreed on a recess Wednesday

to "allow time for preparation on matters we want to discuss."

The recess was a hint that the preliminaries are at an end. The four-man committees from the industry and union are now getting down to issues.

• **Ritual Bargaining**—These were presented in general terms last week as steel negotiations began, formally, with separate talks between the union and the 12 companies. Ritualistic in nature, the company-by-company talks laid the groundwork for continued behind-scenes discussion of local matters during the coming weeks of industrywide talks on wages and other principal issues.

After the separate meetings, USW Pres. David J. McDonald described the discussions as "very constructive."

Nobody was publicly pessimistic; to the contrary, there was—for public view—a spirit of optimism. Yet an atmosphere of pessimism settled over industry and union offices set up "for the duration" in New York.

Anyone who followed the prebargaining maneuvering by the industry and union knew big differences—economic and philosophic—existed between the industry and its organized workers. The 30 to 35 presentations by the parties in the initial week of talks indicated how big the differences really are.

In the shortest, simplest form, here are the positions taken by the parties in company-by-company talks:

• The industry made clear that it fully intends to fight not for just a cheap settlement but for a one-year continuation of present wages—that is, a "freeze" of all the money terms of the present contract.

• The union reiterated that it wants "substantial" gains in pay and fringes this year, but showed what appeared to be flexibility of demands—a hint, at least, of a willingness to compromise.

• **Probing Next**—R. Conrad Cooper, of United States Steel, said "the points



U. S. STEEL's R. Conrad Cooper, executive vice-president for personnel, is industry's key man.



REPUBLIC's general counsel, H. C. Lumb, is a veteran of steel company bargaining with Steelworkers union.



PARLEYS START in a New York hotel room with presentation of initial proposals by negotiators from two sides (pictures, below).



BETHLEHEM's spokesman is its counsel, John H. Morse. Four men in all will speak for 12 producers.



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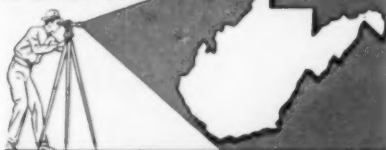
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of view . . . reflect substantial differences between us, the precise extent of which cannot be known until each phase of the over-all problem is carefully weighed in meetings of the bargaining teams."

This is the next stage of bargaining, just opening. It is one of probing for "mutually acceptable principles" on which negotiations toward a settlement can be based. Where pessimism exists, it arises from doubts that the far-apart positions of the companies and USW can be reconciled in the next five weeks.

- **Outside Developments**—While talks got under way in New York, a number of outside developments shared attention:

- Cooper let drop in a press conference the fact that the steel companies have considered a mutual-aid agreement as strike protection (page 27). The union called for a Justice Dept. investigation of legal issues that might be involved.

- Steel consumption continued to build up; running an estimated 22% over the last quarter of 1958, it slowed down the accumulation of inventories as a safeguard against a mill walkout in July. At present production and consumption rates, the inventory probably will be the biggest ever, but it will be short of the five- to six-month supply sought to protect big consumers—the auto industry, particularly. A further improvement in business and

a lower-than-expected steel inventory will toughen USW bargaining.

- On the other hand, there appeared to be growing evidence—perhaps exaggerated but still enough to be given weight—of a reluctance of steelworkers to strike over the big stakes now being talked about by their union negotiators. While there is no doubt about the ability of McDonald to call a strike and shut down 90% of the nation's output, he must be wary of doing so.
- **High Costs**—Considering the fact that the union is anxious to avoid a work stoppage, the bulk of its initial demands hardly can be regarded as conciliatory.

William G. Caples, Chicago, vice-president of Inland Steel Co., described as "prohibitive" the cost of only part of the "fringe" benefits sought by USW—excluding demands for more pay, bigger pensions, and more insurance.

Caples said union negotiators last week asked for a list of contract changes including:

- A 32-hour workweek, with pay for 40 hours, every fourth week.
- An extra three months' paid vacation every five years.
- Increased pay for work on week-ends and additional paid holidays.
- Increased pay for second and third shifts.

Inland computed the cost of these and other fringes at 82¢ an hour.

Unions Eye Small Employers

Successful organizing tactics on the West Coast may set a nationwide pattern. Small companies are being forced to pool their negotiating strength.

Labor, balked recently in its organizing work, is looking to the West Coast for clues to how workers may be brought into unions more effectively. Its leaders privately acknowledge that labor's future may be bleak unless they can develop new techniques.

Unions grew from 4-million members to 18-million in three lush decades—the New Deal 30s, the wartime 40s, and the big-contract 50s. But gains slowed to a trickle during the past few years.

- **Gains in West**—The attention labor is now giving the West Coast is a result of the successes unions have had in California, Oregon and Washington. Labor's ranks are growing there, more effectively than anywhere else.

The Pacific states are now the most highly organized in the country. They are also the high-wage states. They are setting patterns in other ways, too.

A report on West Coast unionism published this month by the Labor Dept.'s Monthly Labor Review comments: "If the [labor movement] is to

continue to grow . . . success might lie in following the pattern that is already emerging on the Pacific Coast." If the pattern is followed, employers will face substantially changed techniques.

- **Techniques**—According to a regional analysis for the Monthly Labor Review by 15 West Coast labor relations experts, unions have succeeded to a greater extent there by:

- Organizing more small businesses by using a whipsaw technique, particularly effective where there are many highly competitive employers.
- Forcing small employers into self-defense bargaining through associations, where their negotiating strength is pooled.

- Maintaining more local union autonomy. Local leaders are concentrating more on community problems and needs—a big help in breaking through barriers in small towns and outlying areas where unionism is suspect.

Of course, these are not the only reasons for labor's successes on the



Mr. Spirak speaking to Mr. Mikoyan

Mr. Mikoyan meets the press

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On Sunday, January 18, Anastas I. Mikoyan, Soviet diplomat, was a guest on National Broadcasting Company's popular "Meet the Press" TV program in New York 6:00-7:00 P.M. A film version was made for British Broadcasting Co. which planned to show it over the British network two days later.

Right after the New York telecast, with the cooperation of NBC International, the film was rushed to Idlewild by Emery and shipped out on BOAC's new Comet jet at 9:00 P.M. that evening. Emery met the shipment at London Airport and, just nine hours after

the film left New York, delivered it to BBC in London for televising on Monday, a day ahead of scheduled showing.

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West Coast. For instance, violent inter-union rivalries among maritime unions, the building tradesmen, factions of the Teamsters, and other labor groups led to intensive organizing, and spurred growth. But, the three points are important in a pattern now being studied by labor generally.

I. Organizing

West Coast unions are organized mostly in the small-employer industries such as trucking, retail trade, hotels and motels, canneries, and dairies. The unions with these jurisdictions—most from the old AFL—have grown with the industries.

This is particularly true in Oregon and Washington. California, in wartime, gained aircraft and other defense industries to bring in the Machinists and Auto Workers, industrial unions, but the three states generally are considered to be conservative, craft-union strongholds. This, in itself, separates the West Coast from the national pattern.

But craft organizing also advanced farther—a trend the report's authors trace back to the 1880s. San Francisco became a big trade union center, and local bargaining spread through the smaller communities. Another boost to organizing, the report shows, has been the "phenomenal growth" of the Teamsters, whose organizing spread through smaller communities like the spokes of a wagon wheel.

• **Leaders**—As a result, union membership of the Pacific Coast outstripped other states until, today, Washington State ranks first in percentage organized, Oregon is fifth, and California thirteenth—but with 1.7-million union members, almost a tenth of the total.

Such successful organizing, the report shows, helps itself: "With economic power has come political strength, which, in turn, has created a favorable climate for further unionization." All three states, it adds, "have administrations and legislatures friendly to unions."

• **Prime Targets**—Geographically, the absence of big industrial centers and industrial employers made the smaller businessmen and communities the targets of the strong unions. But some West Coast businesses (drug, agriculture, and food) were large-scale operations when unions tackled them.

Thus, the unions hit successfully from both sides.

II. Employer Bargaining

In many big negotiations outside the confines of the West Coast, such as the current big steel bargaining, the trend is toward coordination by business competitors in facing strong unions.

Association bargaining is the last step in coordination, when the employer becomes a member of a legal bargaining unit and is bound by its terms of settlement. Negotiating and the settlement are put in the hands of a representative of all the companies.

On the West Coast, author Van Dusen Kennedy of the University of California explains, it has been a device pushed by unions and employers alike. As a result, he says, "a large majority of the employers and nearly two-thirds of the employees involved in collective bargaining . . . are covered by association bargaining."

Primarily, the reason is the high proportion of union organization in the small employer industries, such groups as trucking, warehousing, wholesale and retail trade, services, lumbering, shipping, and canning.

• **Flexible**—Depending on the market conditions, the device can be confined to city-wide associations or expanded to county or state groups of employers.

For the employer, Kennedy says, "the most important fact is that joint action through an association gives small- or moderate-sized employers operating in a competitive market some equality in bargaining power in dealing with a single strong union organization." Also, it can protect the employer from inter-union rivalries. And pooling of costs cuts the expenses of negotiating.

The unions like a standard wage scale and the support they can get from unionized employers to help organize nonunion competitors. Association bargaining saves work for union officers who otherwise would have to negotiate separately with employers.

• **Disadvantages**—On the other hand, Kennedy says, there are disadvantages, too. The employer gives away the right to decide, individually, what settlement terms should be. Additionally, some protest that association bargaining makes "unions the dominant factor in labor relations."

However, Kennedy believes that bargaining on the Pacific Coast has definitely achieved one of the major employer goals—greater equality of bargaining power.

"Unquestionably, there are critics of multi-employer bargaining on the Pacific Coast but the prevailing view which distinguishes this region, including its employers, is that this form of bargaining helps to solve more problems than it creates," Kennedy notes.

On the West Coast, association bargaining has become dominant enough to bring a further refinement—the federated employer association. This is an extension of the collective approach; employer associations from many industries combine to receive guidance from labor relations experts. **END**



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In Labor

• • •

Struck New York Hospitals Carry On, Are Adamant on Union Recognition

Nonprofessional hospital workers—nurses' aides, orderlies, kitchen help, elevator operators, and other house-keeping employees—last week struck six of New York City's 31 voluntary nonprofit hospitals. Nine other institutions faced walkouts as members of Local 1199 of the Retail, Wholesale & Department Store Union maintained picket lines at midweek despite an injunction and a threat of contempt proceedings.

The union claimed its strike impaired services at the institutions, but the hospitals reported patients were being serviced "adequately, with the help of volunteers." Police estimated that only 1,200 nonprofessional employees of about 3,500 were actually on strike.

The strike climaxed a four-month dispute over union recognition. Voluntary nonprofit hospitals are exempt from federal and state labor legislation. The hospitals declared their willingness to give wage increases and fringe improvements, and to set up grievance machinery. But, at midweek, they remained adamant in their refusal to bargain with the union. The union has mustered the support of the city's central labor organization in bringing pressure on City Hall for a settlement. But efforts by Mayor Robert F. Wagner to work out a compromise failed early in the week.

• • •

ILGWU, Fearing "Anti-Labor Climate," Will Raise \$5-Million Strike Fund

The International Ladies' Garment Workers' Union, long known for its policy of industrial peace, this week decided to raise a \$5-million strike fund in view of what it fears is "a developing anti-labor climate."

According to the ILGWU, employer resistance is much tougher now, particularly in the South, and walk-outs are frequently necessary.

Moreover, strikes no longer can be financed on a "hit-or-miss basis." For instance, ILGWU noted, the strike in the dress industry last year and others since then cost the union more than \$3-million.

• • •

Strikes Started in First Quarter Up 20% Over Same Period Last Year

The number of strikes started in the first quarter of 1959 showed a sharp increase—a 20% rise—over the corresponding months of 1958, according to preliminary figures released by the Bureau of Labor Statistics. Man-days of idleness were twice those lost in the first three months of 1958.

Even so, BLS noted that the number of new strikes

for the first quarter was less than in any postwar year prior to 1958, and the number of workers involved in strikes was at a relatively low level.

Revised figures for 1958, just out, show 3,694 strikes started, involved slightly more than 2-million workers; over-all, strikes caused 23.9-million man-days of idleness. All these totals exceeded those of peaceful 1957, when 3,673 strikes idled 1.4-million workers and 16.5-million man-days were lost.

• • •

North Carolina Guardsmen Move In As Textile Strike Violence Grows

National Guardsmen moved into a second major labor dispute this week as North Carolina state troops reinforced 55 state, county, and local police in Henderson, N. C. National Guard units are also patrolling eastern Kentucky coalfields (BW—May 9 '59, p.26).

Gov. Luther H. Hodges "reluctantly" ordered the state's adjutant general to send Guard units into Henderson after a new outbreak of violence in the 26-week strike by the Textile Workers Union of America against the Harriet & Henderson Cotton Mills.

Massed pickets attacked nonstrikers with shotguns, bottles, and rocks at the end of second-shift operations at the company's two mills Monday night.

• • •



NBC Show Goes On, Despite Picket Line

It was hard for picketing TV cameraman Vince Di Pietro to keep his mind on a strike against NBC when Dagmar ignored a National Assn. of Broadcast Engineers & Technicians picket line recently.

When technicians quit work early this month, NBC supervisors and executives took over. Training for just such emergencies enabled the network to continue operations. At times, telecasts lacked professional finesse—but the programs were on the air.

NABET's dispute with the network started over a tape made in France. Although NBC sent nine union technicians to Paris, the union contends that some nonunion people were used in taping a show for Dave Garroway. At midweek, both parties were meeting late into the night in an effort to reach a settlement.



LITOF

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It may be a train order or freight list. It might be a waybill, a purchase order or a register receipt. Whatever the business transaction, chances are it's on Champion bond or mimeograph papers; for among Champion's wide selection of weights and colors there is one to suit every business need. They are smooth, strong, lint-free and have all the essential qualities of good business papers. Careful matching of papers to specific uses and the continuously expanding facilities, which mean prompt deliveries of all grades, are among the many ways Champion serves its customers better.

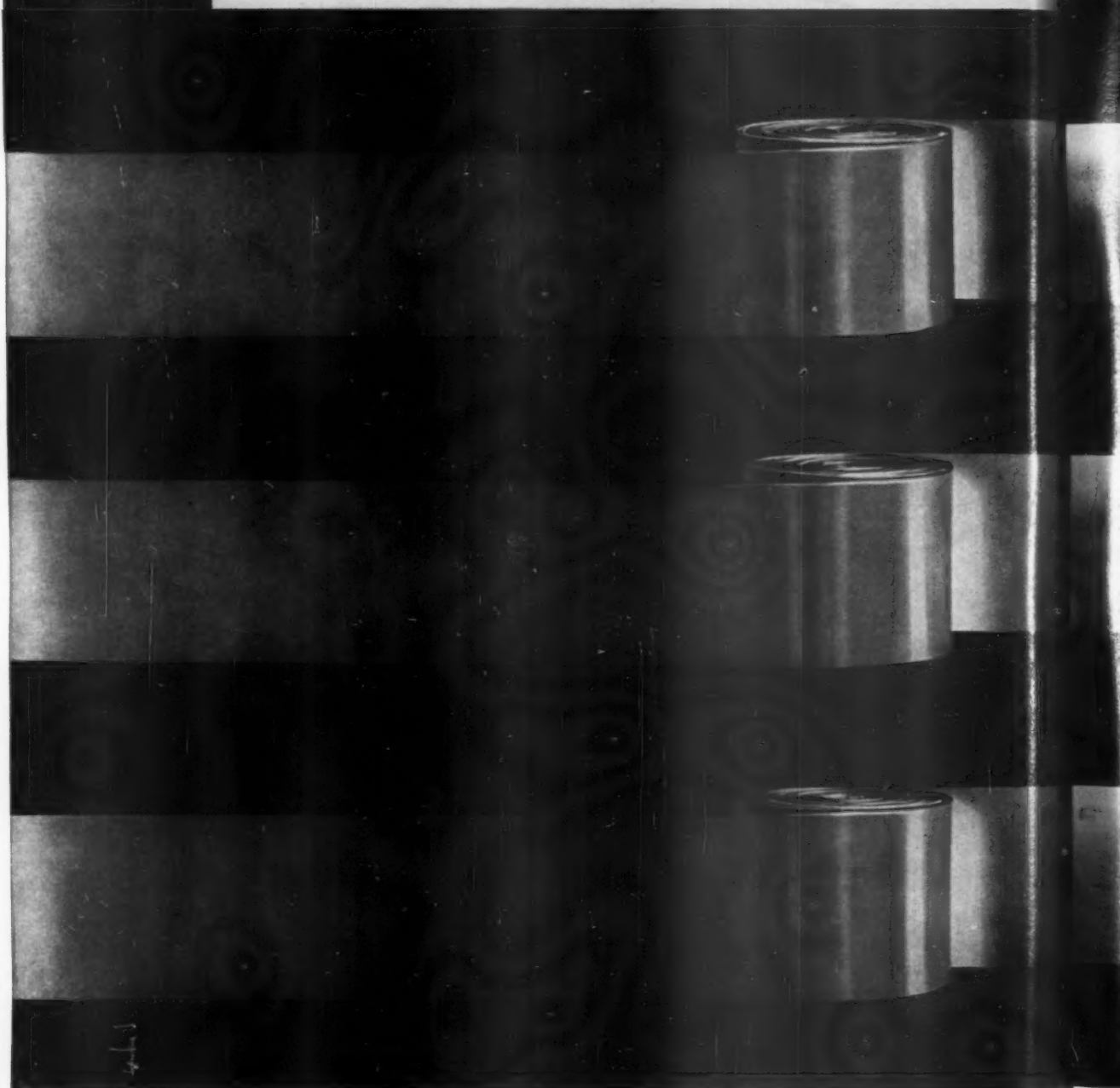
The Champion Paper and Fibre Company, Hamilton, Ohio. District Sales Offices in New York, Chicago, Philadelphia, Detroit, St. Louis, Cincinnati, Atlanta, Dallas, and San Francisco. Distributors in every major city. Makers of quality coated and uncoated papers for books, magazines, envelopes, labels, boxwraps, greeting cards, business forms, tags, tablets, food packaging, and many other uses.



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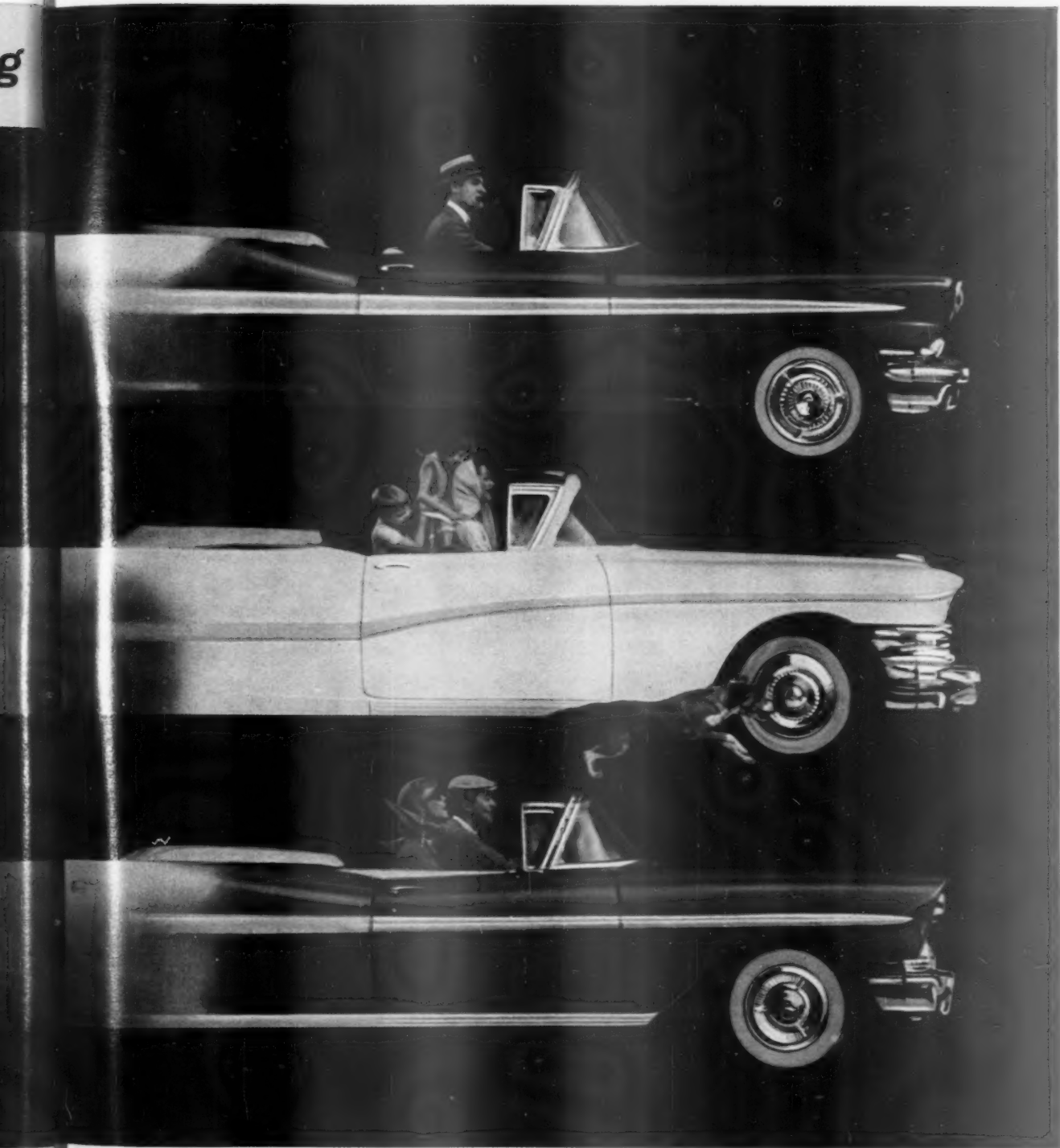
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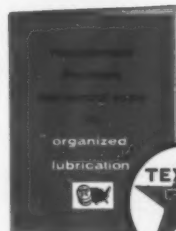
Where Texaco shatters costly ideas

The old idea that lubrication is just maintenance routine is breaking up like old-type grease under the speaker's gavel.

Here at the Texaco Research Center in Beacon, N. Y.—largest such facility—Texaco Lubrication Engineers learn the latest in lubricant technology and *how to apply it* as a major factor in cost control.

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LUBRICATION IS A MAJOR FACTOR IN COST CONTROL

PERSONAL BUSINESS

BUSINESS WEEK

MAY 16, 1959



There's a great deal of confusion as to the relative responsibilities of passengers and carriers in air travel.

Whether you board a company plant-hopping plane or the latest jet, you are governed by a maze of rules ranging from international treaties and Civil Aeronautics Board regulations to the negligence laws of the smallest state.

There's a common belief that a commercial airline is always legally responsible for your safety whether or not you follow the line's safety rules. It's true that airlines are held to extraordinary standards of care, but if you fail to tighten your seat belt when advised to, or wander down the aisle when you should stay seated, you'll have a hard time collecting damages from the airline, if any injury results.

The wise thing is to insure yourself and your property whenever you fly. While you're not without legal protection against airlines and airports, a claim is subject to so many restrictions that a settlement may not compensate for your losses. Often, too, litigation can drag on for years.

A dozen or more companies furnish accident coverage on common carriers, including airplanes. If you want separate air insurance, you'll find that most companies will write up to \$100,000, and yearly the cost will range from \$55 to \$85. Many air travelers buy individual trip coverage (25¢ for \$6,250), but if you fly a lot, you'll probably find an annual policy is a better buy. However, you will pay a lower rate for a basic (common carrier) accident policy that covers air travel.

What about insurance protection while traveling on private planes? The best bet is to have your basic policy (designed for scheduled flights) endorsed to cover such travel. This will cost about \$2 per \$1,000 insurance, usually with a \$50,000 limit.

Few states have limitations on liability where public carriers are concerned. But flights that start or terminate in a foreign country are governed by the Warsaw Treaty. This limits the liability of airlines on international flights to about \$8,300—but proposals to raise this ceiling are now being considered. However, if a passenger's negligence can be proved, the airline may be exonerated wholly or in part from a claim.

No matter where you fly, if you sustain any personal injury, file your claim immediately. If it looks like a lawsuit, don't lose any time. Action must be taken on a foreign claim within two years, about the same as for domestic suits. In this country, the rules that govern civil action for personal and property damages apply. You can sue at an airline's headquarters or at any place where the company can properly be served with a summons. If your injury occurred during an international flight, you can bring action in any country served by the line.

If you fly often in private planes, keep this in mind: Owners and pilots of private planes do not owe you the same responsibility that commercial planes do. In privately owned aircraft, the regular rules of negligence apply. In case of injury, you can collect damages only if the owner or pilot was negligent—and you weren't.

One complicating factor is the guest statutes enacted by many states. This "invitee rule" exempts owners and pilots of private craft from liability to social passengers, unless the pilot displays gross negligence. For example, the family of a girl invited to accompany a reporter friend on an assign-

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
MAY 16, 1959

ment was unable to recover damages when the girl was killed in a helicopter crash. The reporter's suit, however, was successful since his firm had hired the plane.

As for your baggage, airlines—like railroads—are responsible. You're entitled to compensation for damage caused by their negligence, but domestic lines generally limit their liability (usually \$200 to \$250). You can pay an excess value charge, but this is not really insurance. Say you're carrying \$600 worth of baggage, you can declare its value at that amount, but this serves merely as a guide to greater liability should there be a claim. The excess value charge usually is around 15¢ per \$100.

If you're on an international junket, the baggage value limit is about \$7.53 per lb. Keep in mind that both here and abroad you should report baggage loss immediately.

—●—

If you feel you're neglecting your family every time you take off for an afternoon of golf, just remember that a few rounds on the links will make you a pleasanter man to live with.

A new medical report says that golf contributes to your physical and mental fitness, and is good for morale. The study traces the effects of the game on your tensions: As you play the course, you relax, your guards are down, so to speak, and you become more congenial.

Also, doctors generally agree that heart attacks appear to be associated—along with other factors—more with lack of physical activity and poor health habits than with hard work and overexercise.

It's getting easier to find a good golf course, too. Contrary to "19th-hole" guesses, more private golf courses are reappearing on the national scene. But they still number 1,462 fewer than the 4,448 counted in 1931.

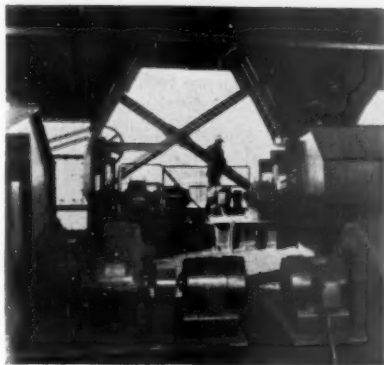
The National Golf Foundation reports that since World War II, the total of private country clubs and golf courses being constructed outnumbers other types of links. Last year, 70 private clubs with 9 or 18 holes opened, 13 expanded, and 70 new clubs and 25 additions were under construction.

As for players, there were almost 1.7-million at private clubs last year; 1¼-million at semi-private clubs; and 1.6-million at municipal courses—a total increase of 754,840 since 1950. To help accommodate the burgeoning numbers, 48 more semi-private clubs opened last year, and 8 were enlarged. Under construction are 62 more and 22 additions.

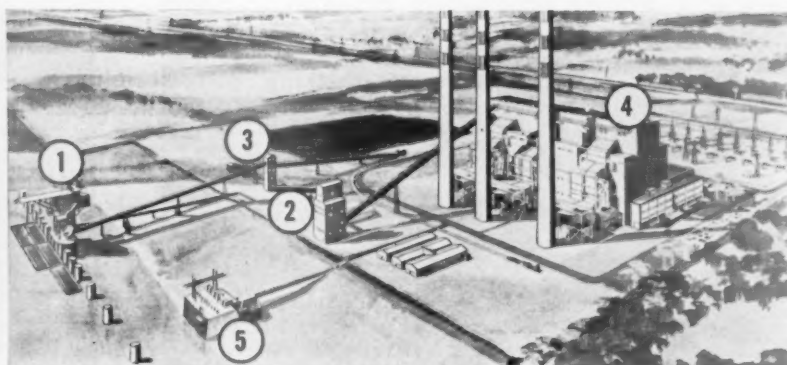
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Potpourri: Haberdashers report increased sales of colorful plumage to business executives for leisure hours. Staging a comeback are evening shirts with flat lace fronts and embroidered smoking jackets popular in the 19th Century. New on the scene are sleeping coats (short nightshirts) in patterned and solid color silks. . . . Auto Europe's 1959 edition of the ABC's of European Auto Travel is available free from the corporation's headquarters at 24 West 58th St., New York. . . . Two floribundas and a hybrid tea rose are the 1960 winners of the All-American Rose Selections. New title holders: Garden Party, a white and pink hybrid tea; Fire King, vermilion floribunda; and Sarabande, a scarlet-orange floribunda. They'll be available for planting in the fall. . . . Your night driving will be safer if you make it a habit to wear sunglasses during excessive exposure to sunlight, says the Eye Research Foundation.

Directing traffic for 2200 tph



1. BARGE UNLOADING—Coal reclaimed by belt feeders is fed to two belt conveyors delivering to transfer tower where it may be directed to outside storage or bunkers.



LINK-BELT coal handling system adds to efficiency of Thos. H. Allen generating station at Memphis

AT this new and highly efficient Memphis power station, designed by Burns and Roe, Inc., coal is carried from barge to storage to bunkers at capacities up to 2200 tons per hour. The entire system of Link-Belt coal handling conveyors is operated by one man from a central control panel.

This huge Link-Belt coal handling network is a product of more than 80 years' experience. Before the advent of commercial electricity, Link-Belt was already establishing a reputation for efficient coal handling equipment in steam generating plants.

Today Link-Belt serves as a single source and responsibility for complete coal conveying systems or components . . . for both central stations and boiler houses. For details, write to Link-Belt Company, Dept. AV, Prudential Plaza, Chicago 1, Ill. Ask for Book 2410. It shows the latest in layouts and equipment for power plants, large and small.

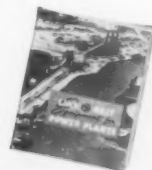


2. COAL CONVEYING—Two Link-Belt 48-in. wide inclined belt conveyors route coal to crusher. Each has a capacity of 1100 tph at speeds of 485 fpm.

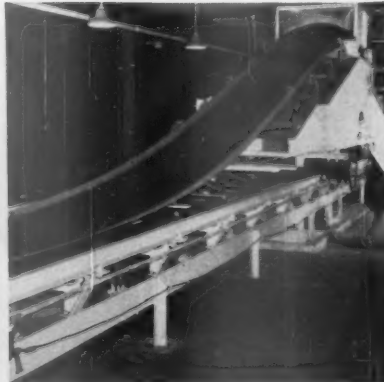
LINK-BELT

One source . . . one responsibility for materials handling, processing and power transmission equipment

15,173



3. STOCKPILING is accomplished by the Link-Belt movable and stationary stackers. Both are equipped with Link-Belt 60-in. wide conveyor belts.



4. BUNKER LOADING—Two Link-Belt 48-in. bunker conveyors are equipped with trippers to distribute coal to bunkers at the rate of 1100 tons per hour.



5. SCREENING—Link-Belt bar screen in water intake pump house protects pumps and other equipment from debris, cleans water for condenser cooling.



ANNUAL BANQUET in black-tie is standard ritual at conventions, such as the Magazine Publishers Assn. at Greenbrier.

The Conventions— Work, Hard Play

Trade and sales meetings mix thinking, golf, socializing. Resort hotels are drawing an increasing share.

Last week some 200 members and guests of the Magazine Publishers Assn. spent three days luxuriating at The Greenbrier, posh resort hotel at White Sulphur Springs, W. Va. (pictures).

What drew them was MPA's 40th annual spring meeting—plus the golf, tennis, swimming, fine food, and secluded luxury that ever since the war have been luring an increasing share of conventioning Americans to the resort hotels. MPA shared The Greenbrier with several other business groups, including the Man-Made Fiber Assn.,

a Dodge division sales meeting, and the Investment Bankers Assn. A couple of weeks before, the huge hotel was cracking at the seams with the addition of 700 members of the American Assn. of Advertising Agencies.

The boom is being shared by all sorts and conditions of resort hotels. Their managers have just wound up a convention of their own, at Boca Raton, Fla. There they discussed ways and means of snaring still more of the business trade, as distinguished from their regular vacation and family business (page 184). The American penchant for conventions—increasingly bearing the more elegant label of conferences—has reached its de luxe flowering in these rural spas that once were the exclusive domain of wealthy families and dowagers who are moving over for the



GOLF dominates the leisure hours. Wives (above) try a putting tournament, while their husbands (right) tangle in a longer range links battle that counts as serious work.





WORKING SESSIONS filled MPA's mornings. That, too, is almost a must for business gatherings.



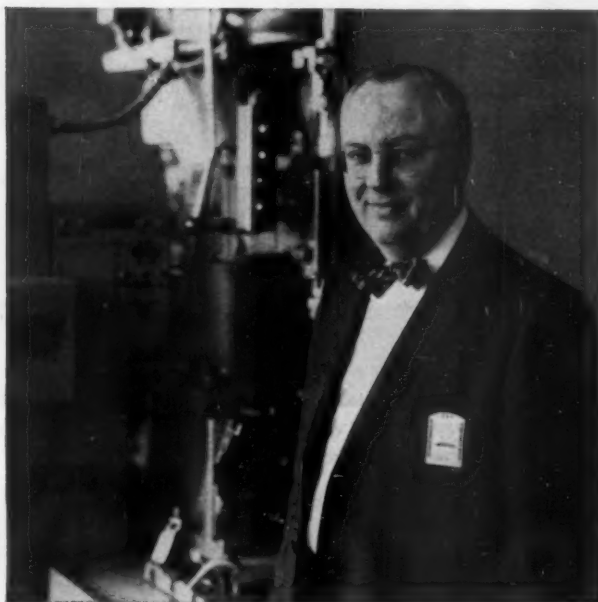
INFORMAL GROUPS found time for leisure chats or shop talk against a sun-drenched playtime background.



COUNTRY QUIET, luxury style, is there for the conventioneer who just wants to take it easy, letting Dobbin do the work on a tree-shaded back road.

THE COCKTAIL HOUR, outdoors (left) or inside, is an integral part of every resort convention, a pleasant prelude to the evening's business.

Hamilton Standard
division of United Aircraft Corporation
**"regularly turns to outside
tool and die manufacturers
for many of its tooling needs"**



—John E. Bateman
Chief Tool Engineer
Hamilton Standard Div.
United Aircraft Corp.
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Read Mr. Bateman's complete letter:

"In supplying today's needs in aircraft accessories and in anticipating the requirements of tomorrow's spacecraft, Hamilton Standard must design and build its products to meet gauge-like specifications. As flight technology advances further into the space age, the more exacting and faster-changing the requirements become.

"The company regularly turns to outside tool and die manufacturers for many of its tooling needs, simple or complex, in the aircraft propeller line or in jet aircraft accessory products.

"These specialists understand our unique problems and many have developed their facilities accordingly. They more or less have become partners in helping us to meet the inherently rapidly changing requirements of our business."

Contract tooling plants have the economical answer to many of your tooling needs. They are always geared to tackle and solve new problems, *fast*. Try them.



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IT PAYS TO GO OUTSIDE FOR SPECIAL TOOLING

growing number of expense-account guests.

• **An American Convention**—Going to conventions—whether in cities or resorts—is not a purely American phenomenon, but it is surely more deeply rooted here than in other countries—more of a social convention, some wag has said. Just about everyone in the U. S. can go to some kind of convention, be he hod carrier, teacher, banker, or top industrialist. The conventions may vary in purpose, size, cost, usefulness, but one way or another they all manifest the American passion for "getting together."

The variations are wide indeed. At one end of the spectrum is the old-fashioned, raucous jamboree typical of the early years of the American Legion, where horseplay and revelry overshadowed more serious aims. This type of meeting is markedly on the wane.

At the other extreme are such ponderous and sedate gatherings as the American Economic Assn. or the Institute of Radio Engineers. Here hard-working technical experts read learned papers aimed at winning the professional recognition of universities and industry. Seldom is there anything so frivolous as an ordinary speech; most of the enlivenment comes from the sideshow activities of job hunting and employers body-snatching from each other.

Between the extremes lies a variety of business conventions, most of them falling into two broad groups:

Annual sales meetings, on a national or regional basis, which have long since become standard business procedure.

Industry associations. Most trade and industry groups have discovered that they must stage successful conventions in order to keep their vitality.

Mostly, the company meetings of salesmen or distributors are hard-working affairs—once Air-Way Branches, Inc., put its convened distributors to work selling vacuum cleaners house-to-house (BW—Dec. 6 '58, p48). At the very least they have sharp focus on inspiration sessions on the hard sell. Sales pep meetings can cost real money when they're national in scope. Earlier this year International Business Machines brought 1,500 or so of its top salesmen to San Francisco from all over the lot; even the remainder of the sales force was tied into the convention by closed-circuit TV.

Desire to tap the ripe postwar consumer markets and stiff competition to win attention of top-notch dealers and distributors have combined to make big business out of incentive trips to special sales meetings. Thus Gibson Refrigerator Co. has signed a \$1-million contract with Eastern Air Lines to fly 5,000 distributors, dealers, salesmen, and their wives to Puerto Rico. There, in batches of 250 at a time, they will

Man who "never uses" the railroads



The food he's eating . . .

The airplane he's riding in . . .

The car waiting for him
at the airport . . .

The new ranch house
he'll sleep in tonight . . .

They've come to him all or part of the
way on the railroads — either as
raw materials, as component parts,
or as finished products.

Man who "never uses" the railroads?
There's never a day when he doesn't!

Railroads carry more of the things you
use than any other form of transporta-
tion. And they save you money, too
— because railroads are a *low-cost*
way of shipping freight.

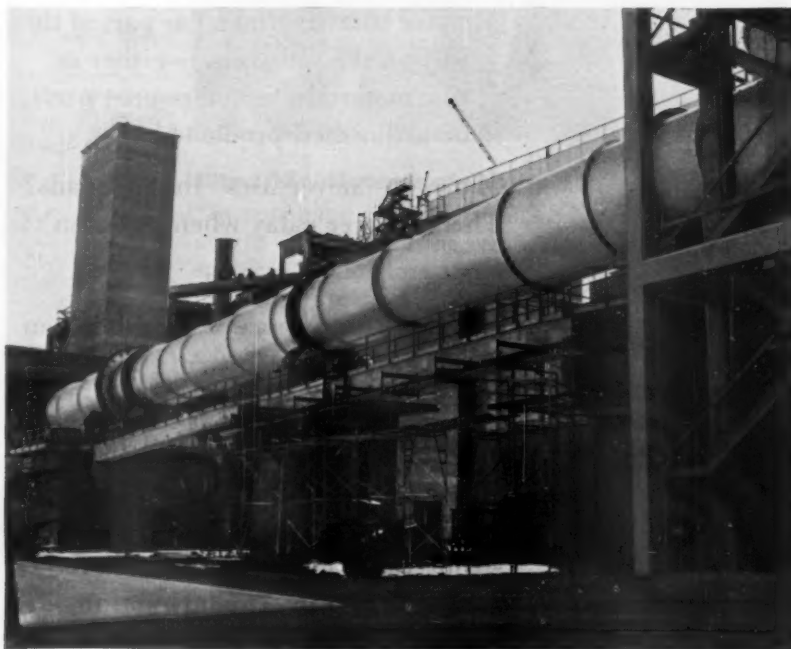
Financially sound, progressive, and
strong railroads are essential to a dy-
namic American economy and to our
national defense. It is of vital interest
to everyone that the railroads be given
the equality of treatment and oppor-
tunity upon which their health de-
pends — now and in the future.

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AT IDEAL CEMENT COMPANY



**...a consistent
program of expansion**



Ideal's new plant at Tijeras, New Mexico, nearing completion

At Ideal, a consistent program of modernization and expansion of production facilities keeps the company's cement production current with the growth of the country.



IDEAL CEMENT COMPANY

DENVER, COLORADO

LISTED ON THE NEW YORK AND PACIFIC COAST STOCK EXCHANGES

15 PLANTS AND 4 TERMINALS SERVING SOME OF THE MOST RAPIDLY GROWING AREAS OF THE NATION

be all-expense guests of the company at the Caribe Hilton.

As for the huge trade exhibitions—such as the houseware show at Atlantic City—they draw thousands of independent dealers and distributors. Manufacturers at the scene ply them with entertainment and bait their order books with gimmicks, and exhibits.

In the postwar period the industry and trade association conventions have also grown into mammoth affairs. Only a few cities have facilities to handle the really big ones such as the National Automobile Dealers Assn. At these conventions, suppliers and manufacturers go all out with lavish "hospitality suites" to impress the trade and open up some new outlets.

One of the biggest of all is the annual convention of the American Bankers Assn., whose 14,000 attendance can be squeezed into very few cities indeed. The meetings draw bankers from largest to smallest; some of the big banks will sink up to \$60,000 in a hospitality suite in the hope of drawing new business from smaller banks.

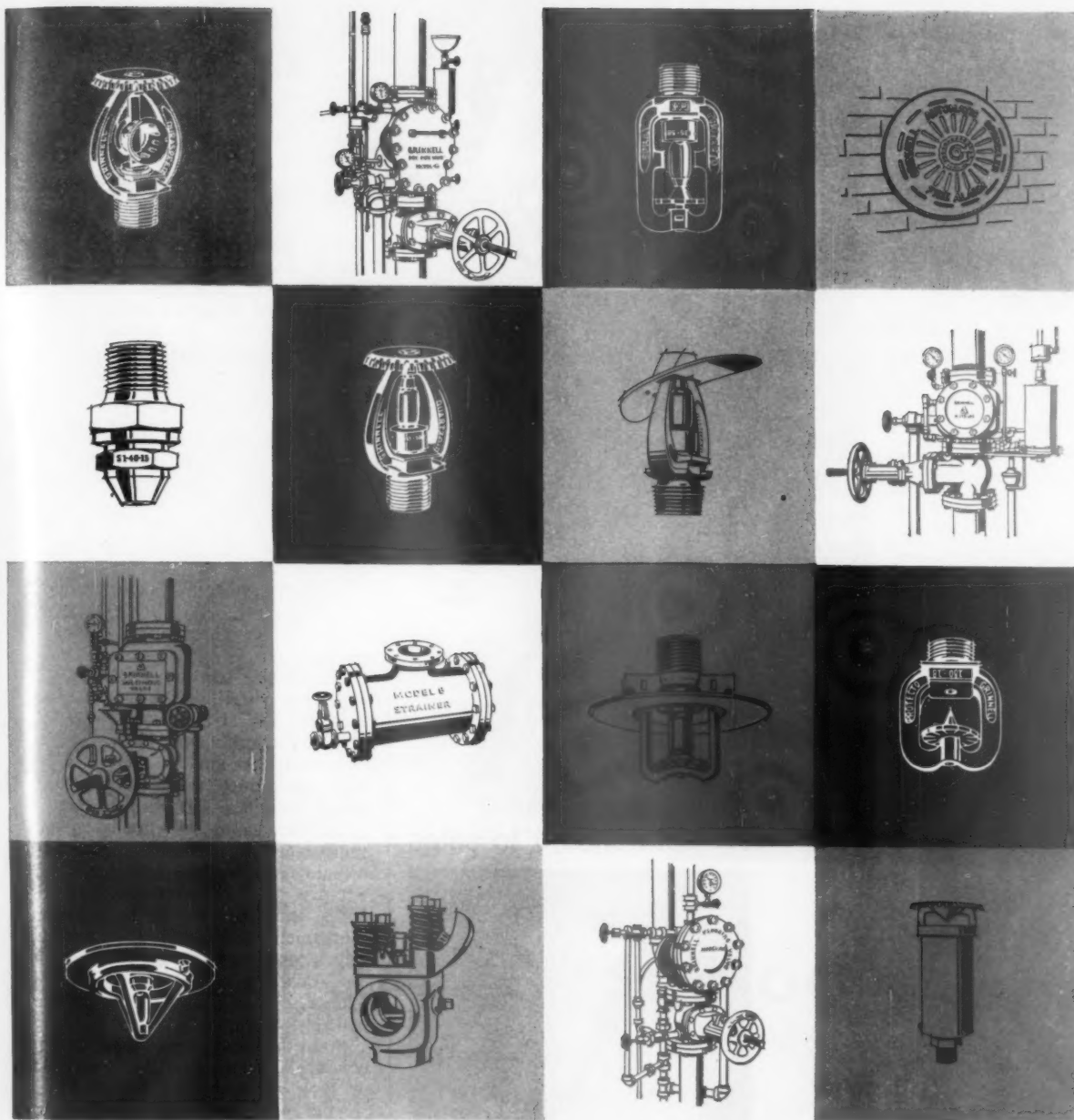
Sometimes the entertainment competition becomes fierce. At the Edison Electric Institute, things reached a point where General Electric, Westinghouse, and Allis-Chalmers—the three big suppliers of heavy apparatus for utilities—agreed to take turns every third year in throwing the party.

- **Enter the Resorts**—When the resort hotels—safely secluded from the hurly-burly of the metropolitan areas—got into the convention business they introduced a new note. The flamboyance and commercialism of many of the older shows was replaced by a few days of luxurious living, spiced with refined business contacts and high-level formal programs. Business deals, to be sure, are sometimes started or even concluded, but such trafficking is frowned on except in private, friendly conversation. Very frequently, the meeting permits only a small infusion of outsiders—suppliers or customers—and for these few most dealings are off limits.

This special type of resort hotel convention is the elite one. Conventioneers can scarcely be distinguished from the hotel's regular guests except by the identification badges that go with every American convention. And the gatherings are kept smallish both by the limits of the hotel's facilities and the fact that they draw mostly from higher, bigger-expense-account echelons of business.

- **Case in Point**—The Magazine Publishers' confab at The Greenbrier last week was thoroughly typical of the resort hotel convention. The MPA devoted the first day to committee reports and pressing industry problems. In the evening, special committees met.

For the rest of the time, it was half work, half play—with businessmen torn



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either way by the irresistible urges to play golf and to talk shop with other businessmen. By a generally accepted ritual, mornings are given over to meetings on serious subjects—the word “challenge” usually appearing in the topic. For the MPA, it was “Defining Today’s Challenge.” On one day, the opening session was highlighted by a panel of outsiders, McGeorge Bundy, Dean of Harvard College, James R. Killian, Jr., special assistant on science and technology to Pres. Eisenhower, and Alan T. Waterman, director of the National Science Foundation.

Bundy twitted the publishers skillfully on what he called the totally inadequate and often incompetent coverage given to science by editors and reporters.

In the evening, after the ritual cocktail hour and at the equally ritual annual banquet, the conferees heard Barbara Ward, contributing editor of the London Economist, speak brilliantly on the world challenge that the U.S. must face, and the part that her listeners had to play in facing it.

Such a schedule of intellectual activities is fairly standard for a resort hotel convention. The talks—serious, sometimes valuable and interesting—serve as a psychic payoff for the enjoyment of the other half of the meeting—the hard play in the afternoon. This conscience factor helps account for the remarkably high attendance at formal meetings, which start at a dawn-like 9 a.m.

In the happy afternoons, a golf tournament is inevitable. After each morning meeting, the convention scatters over acres of countryside. For the ladies, there is likely to be a putting tournament; tennis, horseshoe pitching, riding, and just plain sitting in luxury are available for all. Places such as The Greenbrier even have mineral baths.

From the conventioners, you can get very mixed opinions on the hard value of their gatherings. Certainly, there are the intangible benefits of renewing old acquaintances and making new business friendships. Rare is the businessman who will call the meeting a mere paid vacation.

On the other hand, at least in the case of the trade associations, little of their real work is done at the meeting. That is handled by year-around committees and regional sessions of small panels.

But for the individual, some work gets done, no matter how relaxed the atmosphere. Judgments of people are made, ideas and problems discussed over cocktails and meals.

Whatever the value, it's a sure bet that more and more of the business community will be enjoying the work-play pattern that has grown up in so many fancy spas. **END**

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Robert Harding, right, assistant chief engineer of Arma division, American Bosch Arma Corporation, points out to Frank McShane, cost-improvement expert, the high quality and contrast of an 11"x17" stock print reduced from an original 22"x34" drawing. The print is a sample of many run off on an offset duplicator from an inexpensive offset paper master prepared xerographically by XeroX Model 1218 copying equipment.

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Resorts Bid for Business Trade

The executive setting out for a business convention these days more often than not has a pair of swimming trunks stashed away in his bag and a set of golf clubs slung over his shoulder (page 176). Chances, too, are that the missis and kids are going along to what used to be strictly a male shindig.

This growing trend to make weighty decisions in an informal atmosphere is turning into a real bonanza for resort hotels. In many cases, it's rescuing hotels that just a few years ago were on the skids. The industry estimates that \$500-million is spent each year on business meetings in hotels.

• **More for Resorts**—At last week's meeting of the Resort Hotel Committee of the American Hotel Assn. in Boca Raton, Fla., the burning question was: How can more of this money be steered to resort hotels?

The delegates agreed that last winter was the best season ever for their convention business; and latest bookings indicate that this summer will reach a new peak, as more and more resorts open and close their seasons with conventions. Many hotels make their big sales pitch to this year-round market rather than to the regular vacationist, who is purely seasonal.

• **Choice Spots**—Many of the biggest convention-minded hotels are located in major resort centers. Atlantic City has concentrated on conventions for a long time, but Miami and Las Vegas are stepping up their efforts for a bigger share of this lucrative business.

But there's another important group, a more rural variety, scattered throughout the country. These resort hotels range in size from a few rooms to around 600 and are open anywhere from eight weeks to all year.

• **Getting Business**—In the fight for convention business, resort hotels often start at a disadvantage because they are not so well known as their big city competitors. To overcome this, some areas, where there is a concentration of hotels, arrange joint publicity. In other cases, family-owned resort hotels sell out to chains that are experienced in handling convention business and that have facilities for nationwide booking.

Another solution is offered by organizations such as Robert F. Warner, Inc., of New York. Warner represents 72 independent resort hotels in the U.S. and West Indies, offers nationwide booking facilities, and serves as consultant on convention business.

• **Peaks and Dips**—Big resort hotels—particularly the de luxe and isolated variety—have been riding a roller coaster

for 30 years. Business boomed in the 1920s, slumped in the 1930s, then thrived on World War II prosperity. In the postwar period, changing social patterns rather than economic conditions sent many of them into decline.

After the wartime restrictions on travel were lifted, more and more people spent their vacations on the move. The expanding airlines wafted people to Florida, the West Indies, and Europe. The day was dying when many families spent the whole summer or winter season at a resort.

By the early 1950s, weeds were growing on many hotel golf courses, and resort people faced up to the fact that to survive they had to sell themselves to a new brand of customers. Many set up specialized sales departments, and the prime target was the expanding field of business meetings.

One thing that worked to their advantage was the fact that airplane travel turned out to be a two-sided coin. It hurt the resort vacation business, but it made it possible for companies to hold bigger centralized meetings and to take people to out-of-the-way places.

• **Who Comes**—Most of the gatherings are some form of sales meeting. Regional sales forces are brought together to view new products, or distributors are collected for pep talks. The resort atmosphere is often favored for incentive trips especially when the families are brought along. Sheraton Hotels estimates that 80% of the business meetings at resort hotels are either sales, incentive, or a combination of the two.

• **Sales Pitch**—To promote themselves as the perfect business meeting place, resort hotels make this sales pitch:

A resort hotel usually is isolated. This means that the meetings can be fully controlled. Men are more likely to show up for meetings on time, and in greater numbers. Then, there isn't the same urge or opportunity to visit the night spots and wake up bleary-eyed in the morning. Often the hotel will cooperate by closing its recreational facilities to make sure that everyone shows up for an important event.

Resorts are physically attractive. Most hotels going after meeting business boast several golf courses, swimming pools, tennis courts, and good country air. These features attract the wives and children. Resort hotels also are matching their city competition with air conditioning and staffs trained to keep programs running smoothly.

The meeting group can plan activities as though it were at a private club—especially when it takes up most or all of

the hotel. Many groups, particularly those that include wives, stress outdoor activities such as picnics.

• **Case in Point**—The French Lick Hotel, a famous old resort hotel in southern Indiana, is a good example of what's happening in the industry. In the 1920s, French Lick was a rich man's playground where vacationers from New York, Chicago, and St. Louis gathered to drink the best bootleg whiskey, spend the nights gambling, and be revived in the morning in mineral spring baths.

In its heyday, French Lick was served by special trains from Chicago that pulled into a private siding; but after the crash of 1929 and the repeal of prohibition in 1933, business slid downhill until World War II. Prosperity and travel restrictions returned French Lick to capacity business until 1945.

In the changing postwar vacation patterns, the hotel slipped badly, and the crusade against illegal gambling in the area in 1949 struck the final blow. In 1952, French Lick went into receivership and passed through several hands until it was bought by Sheraton Corp. of America in 1955. From then on, the resort aspects of the business faded into the background.

• **Starting Point**—The idea of using French Lick for meetings wasn't exactly an innovation. In 1925, a special building with 160 rooms and a convention hall was built. But the owner, Tom Taggart—one-time U.S. senator and Democratic National Chairman—was thinking more in terms of political gatherings than of sales meetings.

Sheraton used the old convention hall as a starting point, and spent over \$3-million to put the hotel back in shape. From a low in 1953, when gross sales were a little over \$1-million—convention business already accounted for almost 70%—bookings built up to this year's expected \$2.8-million. Of this, over 85% is due to meetings, and a large part of the remainder to transient business. Few of this year's customers have nostalgic memories of big nights at Brown's Casino across the road.

• **Two-Way Growth**—Another well known old resort hotel, Whiteface Inn, on Lake Placid, shows what's happening to many of the old-line family summer haunts. When its usual summer vacation business began to fall off after the war, Whiteface began to book business meetings for spring and fall. By 1953, this amounted to 60% of sales—about \$280,000. Last year, convention sales accounted for \$650,000 out of \$900,000 in a season stretching from May 24 to Oct. 15. And the hotel's



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vacation season has been squeezed into seven midsummer weeks.

Whiteface is trying to keep the best of both types of business by taking conventions in the spring and fall, and operating as a resort in between. This year, the traditional start and end of the vacation season—July Fourth and Labor Day weekends—have been reserved for business meetings.


• **The Pattern**—Other long-established resort hotels follow more or less the same pattern. Most are lengthening their seasons, and all are counting for growth on the business meeting. While managers won't give out figures, most agree that conventions can be a more profitable operation than vacationers. Meetings are group bookings, and as such are cheaper to handle. And they often can be scheduled so that one group comes in as another goes out, leaving no periods of empty rooms. Another big plus is beverage sales.

But perhaps the biggest worry of all—the weather—is eliminated for the hotel owner. A cold or rainy spell can bring vacation cancellations, and a few bad weather years in a row can spell curtains. Conventions are booked years in advance—up to five at popular hotels. Of course, the hotel must absorb the loss if bad weather keeps planes grounded, as rooms are booked on a no-show, no-pay basis.

• **Help Problem**—Since convention business stretches a season or even keeps a resort open all year, it helps solve another big problem—help. Hotels have a hard time getting a trained staff for short vacation seasons, and if things are slow for a week or so, they can't afford to keep help standing around. So, a hotel with steady year-round business is in the best hiring position, and one with a long spring-to-fall season has a good chance of getting people who work in southern hotels in the winter.

• **Everybody Hops**—It isn't all gravy, however. The competition is getting rougher, and convention leaders are being approached by more and more hotel sales managers. To keep a convention coming, you have to keep every guest happy. As one hotel owner says, "We have to big-brother him from the time he leaves his home until he gets back." This can mean anything from giving advice on what to wear to finding a babysitter for the kids.

And convention goers keep any kitchen hopping. The average vacationer eats more than usual for the first few days at a hotel, then settles back to his regular pace. But with new groups coming in every three or four days, the hotel has a steady run of heavy eaters. Some even have to enlarge their kitchens to keep conventioners going on their rounds from meetings to golf to the swimming pool. **END**



Everyone reads between the lines

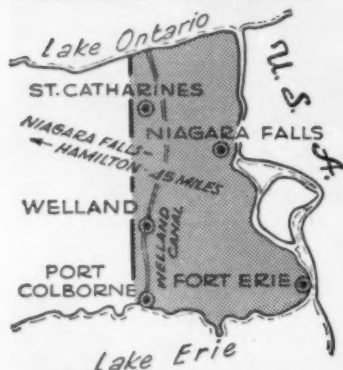
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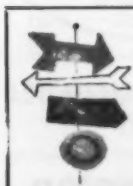
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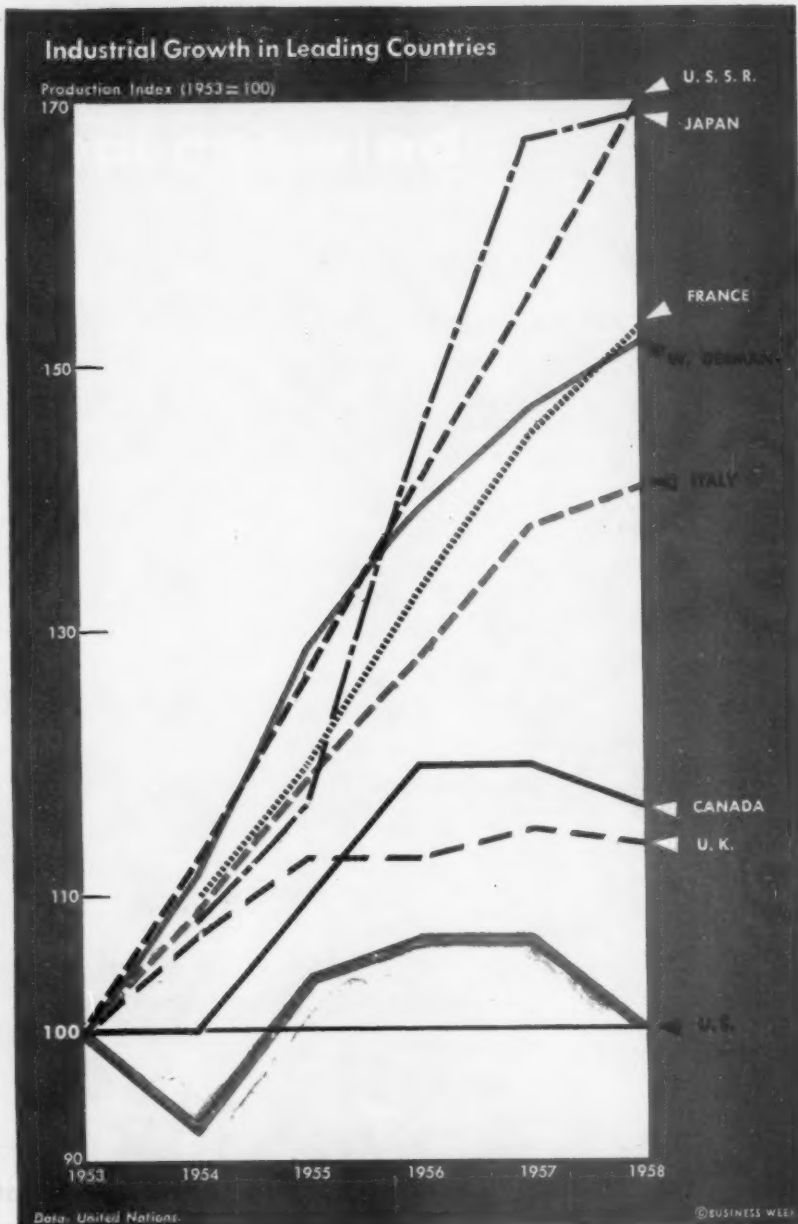
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CHARTS OF THE WEEK



It Looks Worse Than It Is

Since 1953, the fastest growth in industrial production (manufacturing, mining, and electric power) has been chalked up by the Soviet Union (70%) and Japan (69%). The U.S., working from a higher base, found itself in recession-ridden 1958 at exactly the same point as in boom-year 1953. With an earlier year as the starting level, the U.S. would have made a better showing.

In actual physical or dollar volume,

of course, the U.S. is far out in front (see other charts). Other industrial nations have been growing much faster in the past five years, yet even Russia's claimed rate of growth would make it a long time before any nation can overtake the U.S.

Last year, France nudged West Germany out of third place with a five-year rise of 53% in industrial production, chiefly in factory and power output.



Photo: Teletype unit, Clark Purchasing Dept.

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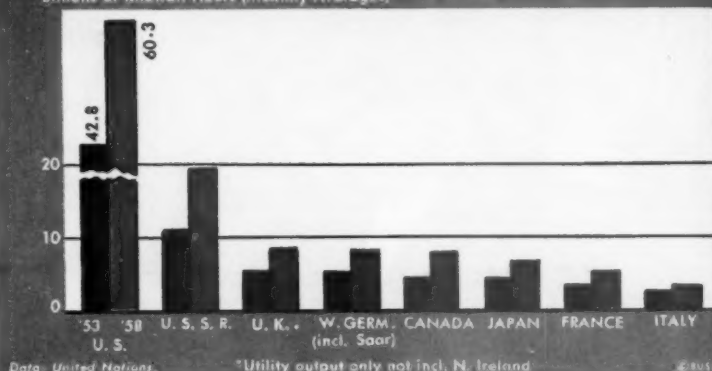
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Electric Power Output—Leading Industrial Countries 1958 vs. 1953

Billions of Kilowatt-Hours (Monthly Averages)



U.S. Far Ahead in Power Output

In one of the most significant measures of industrial activity, electric power output, the United States is the undisputed world champion. While there are still no serious contenders for the crown, other leading industrial nations have gained impressively:

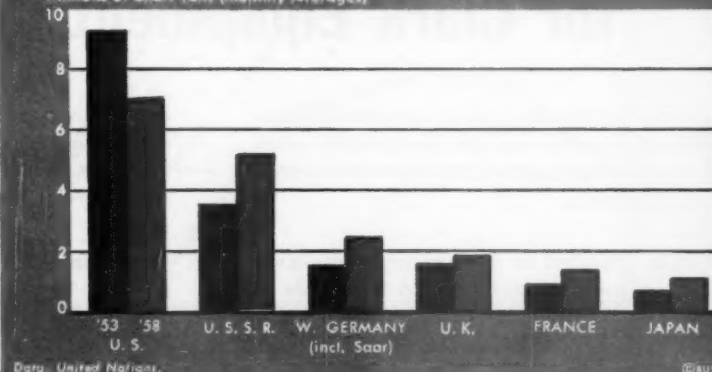
- The Soviet Union with a 73% gain over 1953; West Germany with a

54% advance; United Kingdom with 50%; France with 49%; Canada with 48%.

Though its rate of gain was less, the U.S. raised its average monthly kilowatt-hour production by 17.5-billion—more than the combined 1958 output of West Germany and United Kingdom.

Crude Steel Production in Leading Industrial Countries 1958 vs. 1953

Millions of Short Tons (Monthly Averages)



The U.S. Lead Is Shrinking

On a falling tide, the U.S. clung to its lead among the world's steel-producing nations last year, but the margin over the Soviet Union shrank to a scant 2-million tons in average monthly output. Five years earlier, the U.S. held an edge of about 5.8-million tons.

Last year, of course, was the poorest year for the U.S. steel industry since 1949. Output dropped from a monthly average of 9.4-million tons the previous

year to an average of 7.1-million tons. In 1955, the peak year, it ran 9.8-million tons per month. Meanwhile, Russia steadily increased its monthly average output from 1953 to a level 45% higher in 1958. On a smaller scale, this rate of growth was matched by West Germany. Japan, the smallest crude steel producer among the six leading industrial nations, scored the highest rate of gain, 58% in five years.

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The Dollar Gap Is Closed Now

At a meeting sponsored by the American Bankers Assn. in London last week (page 119) there were rumors that the West European central banks might cooperate with our Federal Reserve Board to relieve the pressure on the U. S. dollar. According to the stories coming out of London, our British and European friends agreed to exercise caution in converting to gold the dollar balances they now are accumulating. (Last year we lost \$2.3-billion in gold—mostly to Western Europe—and so far this year about \$300-million.)

There's reason for taking this story with a grain of salt—it may even have been inspired by speculators who wanted to weaken the dollar rather than strengthen it. But the fact that such a story can circulate underlines the extent to which the dollar has lost the luster it once had as an international currency. While there clearly is no reason to fear a real run on our gold reserves, it is high time for the country to take a hard look at what's been happening to our balance of payments.

This is a complex subject. But, in essence, the problem boils down this way:

- The U. S. now is making payments to the outside world that regularly exceed our receipts from other countries. The difference can be taken by foreign countries either in the form of dollar holdings or gold. Even if foreign net earnings are left in dollars, these holdings are a potential demand on our gold reserves.

- It is not our merchandise trade that is producing the deficit. We still export more goods than we import. But our export surplus has been shrinking as a result of a fast climb in imports and some decline in exports (page 32). And so, our export surplus now falls far short of covering our net payments on services, the flow of U. S. private capital abroad, and official military spending overseas.

Unfortunately, there is no simple solution to the problem we face. But one thing is quite clear. Our predicament has been the result in large part of the "dollar gap diplomacy" we have been conducting for the past 12 years. We have not only strengthened the industry of Western Europe and Japan with our financial aid but have adjusted our trade policy to encourage imports rather than exports. It is time that our government recognized that the dollar gap has been more than closed, and that its job today is to deal with our own dollar balance problem.

There are sure to be demands that we cut our payments deficit by reversing our liberal trade policy and restricting imports. But, by shutting out foreign competition, we might well encourage price inflation in the U. S. and further weaken our international competitive position. For the time

being at least, it would seem better to look primarily at the export side of the equation and to find means of encouraging sales of American goods abroad. We are glad to note that, at a session of the General Agreement on Trade and Tariffs (GATT), the U. S. this week pressed for a removal of all discrimination against dollar goods.

Washington should strengthen its pressure on this front. It might also be advisable if the Administration were to consider the idea of setting up a system of export credit insurance comparable to the systems Britain and West Germany use so successfully in pushing their exports.

Until we have had a chance to see what can be done about our exports, there is no reason for this country seriously to consider a protectionist solution to our dollar balance problem.

Fringes Aren't Free

The strange rites that now have become a standard part of the opening of contract talks between the steel industry and the steelworkers union are with us again. The opening session with some 92 union members and 72 industry officials in attendance had more the feel of a TV spectacular than the dead serious business these sessions really are.

And just as curious as some of the antics that surround the opening of negotiations is some of the economic nonsense that has bloomed this spring.

For example, there is the notion that has gained popularity among some union members—and has been occasionally fostered in the past by industry and government—that there is some magic difference between the economic effects of giving wage increases and providing increased "fringe" benefits. Recent surveys among steelworkers have turned up many who conceded that wage increases would be inflationary but insisted that fringes would not.

The truth of the matter is that fringe benefits are not only widely misunderstood but the label itself is a misnomer. A recent Chamber of Commerce study reported that industrywide fringe benefits equaled 22% of payroll, or \$981 a year per worker. And in 12 years, fringe benefits have increased almost 50%.

Fringe benefit payments come out of the same corporate till as wages. They are costs of doing business and are reflected in the cost structure of products just as wages are. The fact that they don't go into the weekly pay envelope does not mean that they come like gifts from a Fairy Godmother with no one paying the bill. The man who will pay the bill in the case of the steel bargaining is the ultimate consumer, and we hope that both labor and management will remember it.



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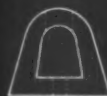


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